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Missouri Medicine

Journal of the Missouri State Medical Association

January 1988

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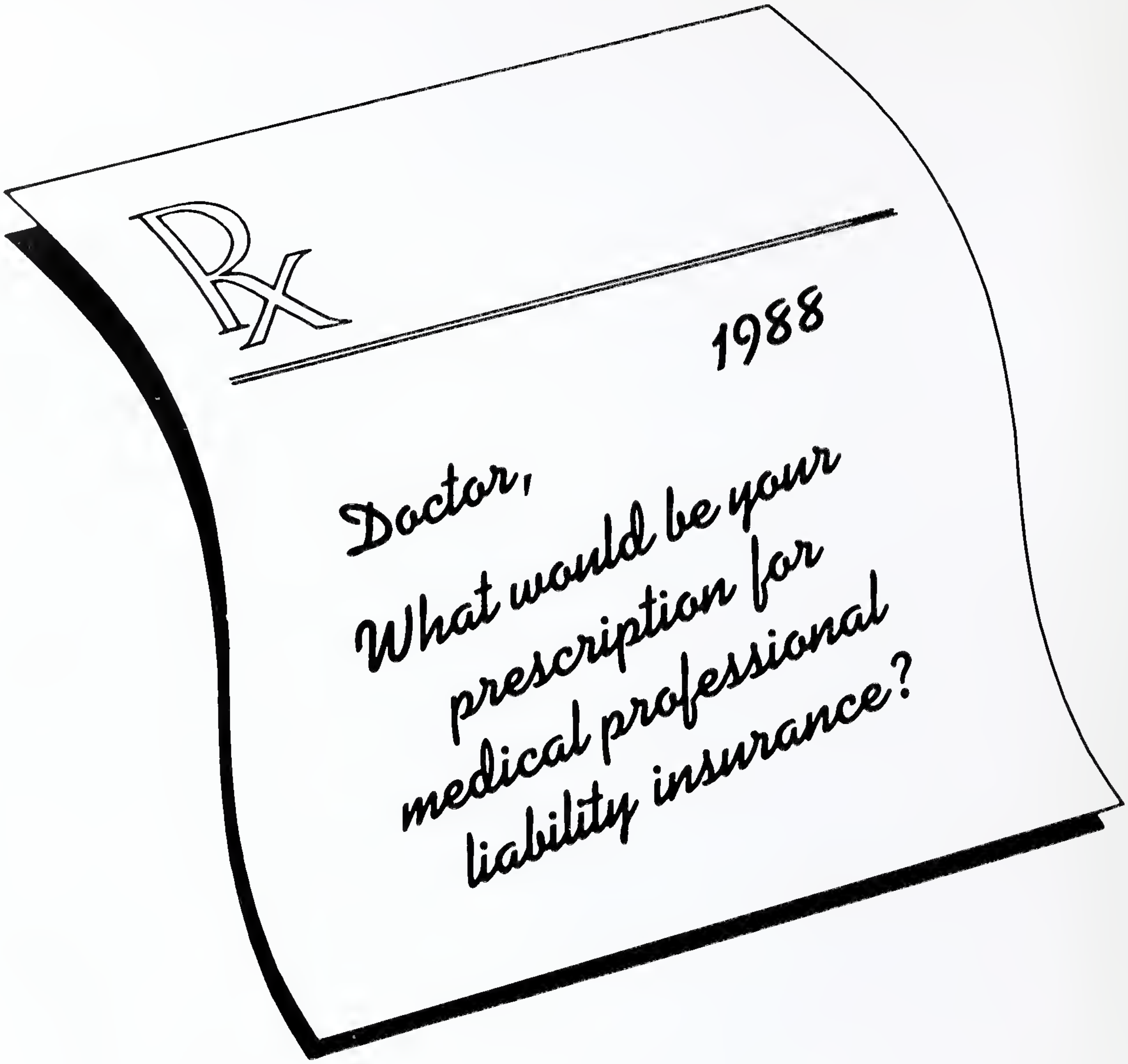
In this issue:

- Diagnosing Appendicitis by Computed Tomography
- Clinical Uses for Interferon in the Treatment of Cancer
- Gemfibrozil Therapy in Patients with Coronary Heart Disease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"Split-rail fence," photographed outside of West Plains, MO, by Kailash Tarneja, M.D. Dr. Tarneja is a radiologist at the Ozark Medical Center in West Plains.

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Missouri Medicine

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MSMA members appointed

Two MSMA members were recently appointed to serve on the Board of Registration for the Healing Arts.

David Wilkinson, M.D., of St. Louis and Darrel D. Domann, M.D., of Springfield were selected for the four-year terms.

Dr. Wilkinson is a neurosurgeon and an MSMA Councilor from the Third District. Dr. Domann is a plastic surgeon. ■

New section added to License Renewal Form

A new questionnaire section has been added to the License Renewal Form which Missouri physicians will soon be receiving from the Board of Registration for the Healing Arts.

The questions, which deal primarily with final disciplinary actions taken against a physician, were mandated in House Bill 667 that was passed by the Missouri Legislature this past Session.

The Board originally proposed to use the same questions on the License Renewal Form that it uses on the License Application Form for new physicians.

However, after reviewing the list of 22 proposed questions, the MSMA discovered that several exceeded the mandates laid down by the Legislature. The MSMA objected to 10 of the questions either in part or in entirety. Also, each question was preceded by the phrase, "Have you ever been. . . ."

Following discussions between the Board and the MSMA, the groups agreed to changing or dropping all the questions that were objected to by the MSMA.

In addition, the Board agreed to limit the time frame in the questions to the physician's last license renewal or one year.

The language in HCS 667 which mandates the questions by the Board states, "The (renewal) application shall include . . . all final disciplinary actions taken against the applicant by any professional medical or osteopathic association or society, licensed hospital or medical staff of the hospital, state, territory, federal agency or country; and, information concerning the applicant's current physical and mental fitness to practice as a physician or surgeon."

The Legislature adopted this language as a result of hearings held in 1986 on the medical malpractice crisis. During those hearings it became obvious that the Board of Healing Arts did not have the authority to collect data on Missouri physicians who had been disciplined several times in the practice of medicine. It was felt that the Board, which is responsible for licensing all Missouri physicians, must be able to receive such information in order to carry out its charge.

If MSMA members have questions or would like to review the License Renewal Form, they should contact MSMA headquarters at 314/636-5151. ■

December 12 Council meeting highlights

The MSMA Council met on December 12 at the Capitol Plaza Hotel in Jefferson City. Here is a summary of the Council actions:

- Approved the minutes of the September 12, 1987 Council meeting.
- Adopted the recommendations of the Committee on Strategic Planning, directing the Executive Committee to oversee execution of the initiatives.
- Adopted recommendations of the Executive Committee regarding the Physician Rehabilitation Committee (PRC), as set forth in the Executive Committee report of November 24.
- Accepted the proposed budget for 1988.
- Referred the Metropolitan Medical Society of Greater Kansas City resolution regarding a peer review service to the Executive Committee for study.
- Voted to accept suggestions regarding the Physician Rehabilitation Committee including hiring a new counselor in St. Louis and putting the administrative assistant on full-time status until 1/31/88. The Council also voted to make Dr. Duggan "director of transition" until 1/31/88.
- Accepted the model Hospital Medical Staff Section bylaws, and directed they be copyrighted prior to release.
- Referred four recommendations of the Public Affairs Commission to the Executive Committee: 1. Medicare/practice management/PRO staff specialist be added to or incorporated into the MSMA staff; 2. Instigate a public recognition program for community service provided by MSMA members; 3. Add an ex officio Auxilian to the Commission; and 4. Publish guidelines on "closing a physician's office" in Missouri Medicine.

The next Council meeting will be January 30, 1988 at the Holiday Inn Executive Center in Columbia. ■

Medicare limits physician charges

Payments for most physician and other medical health services furnished under Part B of the Medicare program are made on a reasonable charge basis through Medicare Part B carriers. Some Part B payment exceptions are hospital outpatient services, which are reimbursed on a reasonable cost basis, and diagnostic laboratory services, which are reimbursed under a fee schedule.

In determining the reasonableness of a physician's charge for Medicare purposes, carriers have been required to consider the following factors, basing payment for physician services on the lowest of:

- the actual charge;
- the customary charge for similar services generally made by the physician furnishing the service; and
- the prevailing charge in the locality for similar services. The prevailing charge may not exceed the 75th percentile of the customary charges of physicians or suppliers in the locality, and an economic index limits annual increases in prevailing charges for physician services.

On September 22, 1986, the Health Care Financing Administration (HCFA) published a proposed rule in the *Federal Register* making changes in the regulations governing the reasonable charge methodology. On November 18, 1987, HCFA published its final rule in the *Federal Register* limiting payment for physician services in facility outpatient settings to 60% of the prevailing charge for the service. HCFA's rationale is that a physician who furnishes services in the office setting incurs related office overhead expenses that are not incurred by a physician who furnishes services in a facility setting. HCFA's purpose in establishing this limitation is to ensure that Medicare does not duplicate payments for overhead expenses by paying both the facility and the physician for those overhead expenses.

The final rule is effective with services provided on December 18, 1987, and thereafter. ■

HMSS meeting January 30-31

MSMA's Hospital Medical Staff Section (HMSS) will meet in Columbia January 30-31 at the Holiday Inn Executive Center at I-70 and Stadium Blvd. The HMSS was organized last year and is comprised of elected representatives from Missouri hospital medical staffs. Delegates from at least 90 hospitals will attend the HMSS conference. James Redington, M.D. of St. Louis serves as chairman of the section.

The following presentations are scheduled:

- Risk Management
- State Board of Registration for the Healing Arts
- Utilization Review Oversight Committees
- Credentialing

In addition, a Joint Commission representative will discuss medical staff issues and changing hospital environments. There will be a report on the AMA HMSS. Plus, the Steering Committee's model HMSS bylaws that were approved by the MSMA Council will be discussed and distributed.

For more information, contact MSMA at 314/636-5151. ■

Missouri Register update

Physician licensure. An emergency rule was published in the *Missouri Register* regarding post graduate training requirements for permanent licensure. The State Board of Registration for the Healing Arts emergency rule requires graduates of medical colleges approved and accredited by the American Medical Association (AMA) or the American Osteopathic Association (AOA) to present a certificate showing satisfactory completion of one year of post-graduate training. The training must be in an AMA or AOA approved program. The certificate has to accompany the physician's application for permanent license as a physician or surgeon.

In addition, graduates of medical colleges not approved by the AMA or AOA must supply satisfactory evidence of three years of post-graduate training in an AMA or AOA approved program.

This emergency rule is the result of a new statute enacted by the General Assembly in 1987. It became effective December 31, 1987 and expires April 29, 1987.

Family Residency Programs. The Department of Health (DOH) published a proposed amendment to the Funding of the Programs to Increase General and Family Physician Training Opportunities. The DOH would allow new and existing family practice residency programs or a general rotating internship to apply for funds, allow DOH to award funds for portions of the program and require interim fiscal and performance information to be sent to DOH. ■

1988 State Legislative Session

Physicians can expect to see many, many bills affecting medicine introduced and considered by the Missouri Legislature, which convenes January 6, 1988. Topics ranging from AIDS to direct reimbursement for RN's to Medicaid fees to dispensing physicians will be debated.

The MSMA will attempt to

keep "reason" in any AIDS legislation by having it conform to MSMA and AMA recommendations. More than 40 bills dealing with AIDS are expected to be introduced.

RN's will again have measures introduced to mandate direct reimbursement for nursing services. The MSMA has opposed this since it will create another direct provider and result in increased utilizations and, thus, health care costs.

Pharmacists in the state will pursue a bill that would make dispensing physicians register with the Board of Pharmacy and require physicians to dispense drugs at cost. According to the pharmacists, this would take the profit motive out of dispensing and ensure that physicians are merely offering a service when it is needed.

MSMA will again push for more equitable reimbursement for physicians under the state's Medicaid program. After securing some increases last Session, the funding was later vetoed by the Governor due to budget constraints. The budget appears even bleaker this year, but the Association is building arguments that better fees for physicians may well prevent Medicaid patients from having to use more costly hospital services.

Although many more issues will surface during the next few weeks, physicians can already expect bills that would:

- Provide state-funded insurance for the uninsured.
- Place medical malpractice laws under a "workers compensation-type system."
- Require physicians to report injured auto drivers who are suspected of being intoxicated.
- Permit the practice of lay midwifery in Missouri.
  - Provide a mechanism of "registering" several allied health groups, i.e., physician assistants, occupational therapists, respiratory therapists, etc.

MSMA members should be aware that as many as 250 bills which would affect their practice and their patients will be considered by the Missouri Legislature during the next few months.

The Association still needs "Key Contacts" to inform state legislators of medicine's views on important issues. These "Key Contacts" are kept informed through communications from the MSMA so that they know the issues and can be effective in their discussions with lawmakers.

Do you want to have an impact on the laws that govern your profession? Write "Key Contact" Program, MSMA, P.O. Box 1028, Jefferson City, MO 65102. ■

Nurse-Midwife program implemented

The Missouri Department of Social Services implemented a Missouri Medicaid Nurse-Midwife Program on December 1, 1987.

To enroll as a provider of nurse-midwife services, the provider must:

- Be currently licensed as a registered nurse (R.N.)
- A nurse-midwife who resides in or outside the state of Missouri and who practices in whole or in part in Missouri must be a currently licensed registered nurse (R.N.) in Missouri.
- A nurse-midwife who practices in another state and provides services to Missouri Medicaid recipients in that state must be a currently licensed registered nurse (R.N.) in that state and be legally authorized under that state's law to practice as a nurse-midwife. Evidence of active participation as a nurse-midwife in that state's Medicaid program will be accepted as documentation.
- Be currently certified by and maintain certification by the American College of Nurse-Midwives.

The Association believes under Missouri law a nurse-midwife must work under a written protocol developed jointly by the nurse-midwife and the responsible physician. The protocol must contain several mutually-agreed-upon statements that define the individual and shared responsibilities.

The Association will closely monitor the enrollments and the provider services to ensure that Missouri law is followed in providing these services. ■

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In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

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Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: *Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.*

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This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: *Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.*

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. *If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K+ intake.* ***Associated widened QRS complex or arrhythmia requires prompt additional therapy.*** *Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.*

Precautions: *The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin[ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.*

Adverse Reactions: *Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.*

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

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EDITOR'S DESK

by Jordan W. Burkey, M.D.
Editor

When it comes to serving patients, it doesn't look like medicine will be marching alone

Medicine et al

The calendar says 1988, and already it's countdown time — 24 months until the 1990s. We do pity the editors of a decade from now — they will have to write ponderous predictions for the oncoming millennium, while we can get by with a slow-minded opinion as to how doctors should march into the last ten years of this century.

When it comes to serving patients — and that is what medicine is all about — it doesn't look like doctors will be marching alone. Far from being the heart and soul of medical care, it seems like physicians are more like the arms and legs, doing the work, but not being granted much credit for keeping health care together. There are nowadays umpteen-dozen support groups for diseases of all sorts who claim to give patients the emotional and scientific support they need to cope with their illnesses. This is a role which these groups often insist the physicians have ignored.

It is hard to find a disease that doesn't have a support group attached to it. Dr. Stephen Lock of the British Medical Journal (*Br Med J* 1986;293:1596-1599) thought he had found an interesting example of this in the British National Eczema Society. Further research, however, revealed the existence of a Bengali Mothers Support Group for Children with Eczema in London. Every ailment needs an auxiliary.

Along aside the physicians, and sometimes walking ahead of them, are the nurse practitioners "who really care about their patients," the pharmacists now prescribing, hospital administrators with their health plans, and government officials telling us all exactly how to keep step. In this allegorical march, we cast shadows, and in physicians' shadows are paramedical groups coming along with them, constantly pushing and promoting to be a greater part of the health team.

There are countless healthcare practitioners of all degrees of training and expertise, many of them looking to the 1990s as a golden opportunity to expand their services. The chiropractors, podiatrists, midwives, optometrists, and others are seeking to enlarge their roles — stepping out of the shadows. Then there are the free-lancers — self-styled nutritionists, exercise specialists, counselors, lay nurses, and social therapists who have joined the growing ranks of "health personnel." The medicine man's wagon of old has disappeared, but after all, this is the jet age!

There will be challenges enough for all of us in the 1990s. Most of the public expects to live into the next century, and they expect physicians to keep them in good health to fulfill that goal. We have a lot of medical weapons available to do this, but I have a feeling that this can best be done with doctors remaining in charge of the care of their patients. Any overdevelopment of the various support and ancillary medical groups runs a danger of being detrimental to our patients' health. If this is medical chauvinism, so be it. ■

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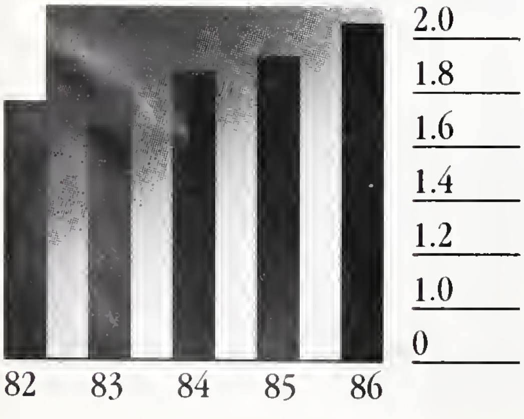

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Diagnosing Appendicitis by Computed Tomography

James K. Fisher, M.D., and Tony Findley, M.D.
Kansas City, Missouri

Computed tomography (CT) scanning has not been considered a standard tool for the diagnosis of appendicitis. A study of 16 patients with appendicitis demonstrates the potential worth of using CT in this evaluation, however. Although CT findings may be non-specific, correlation with other findings, signs and symptoms can lead to accurate diagnosis.

Appendicitis frequently presents with typical signs and symptoms that obviate the need for further evaluation. The patient can, without delay, have definitive surgical or medical therapy. However, atypical presentations can obscure the diagnosis. Frequently, a barium enema (BE) is used to confirm or exclude the possibility of appendicitis, and this has met with much success. While computed tomography (CT) can be accurate in the diagnosis of abdominal abscesses, including appendiceal abscess, it has not been thought of as an instrument for the diagnosis of appendicitis.

We reviewed our cases of appendicitis in patients who also underwent a preoperative abdominal CT scan. A limited number of cases were found. While there are many nonspecific CT findings in appendicitis, this type of non-invasive examination can be a highly sensitive mechanism to detect appendicitis, especially in light of associated history. It can make the diagnosis of appendicitis accurately and promptly, with or without a BE for confirmation. Our experience supports a role for CT in the evaluation of atypical appendicitis.

Materials and Methods

We conducted a medical records computer search for all cases at St. Luke's Hospital, Kansas City, Mo., with a surgically proven diagnosis of appendicitis, who had also had a preoperative CT abdominal scan. Since 1979, there have been 16 such cases. These were reviewed for correlation of clinical, surgical, pathologic and CT findings.

All CT scans were performed on a GE-8800 or 9800 CT scanner with 10-mm slice thicknesses at 10mm or 20mm intervals. Fifteen of the 16 patients received oral contrast medium (E-Z-CAT), and 10 of the 16 were injected with intravenous contrast material. The intravenous contrast consisted of a bolus of 100-150 ml of aqueous iodine (usually 30% Hypaque or 43% Conray), followed by an intravenous drip of solution until the examination was completed. Only one patient received both pre- and post-intravenous contrast examinations. The cases in which intravenous contrast were employed were reviewed by four staff radiologists to evaluate whether there was enhancement in the region of interest and whether the contrast studies provided additional information.

Results

Thirteen of the 16 CT scans were interpreted positive for appendicitis prior to surgery. Two of the 16 cases initially interpreted negative were eventually found to be positive and review of the CT scans revealed definite findings. One case had a right upper quadrant cecum with questionable adjacent inflammatory change, our only negative CT examination.

The ages of the patients ranged from 21 to 88 years. There were 10 male patients and six female patients, all caucasian. Many patients had symptoms of right lower quadrant pain with various other complaints including nausea, vomiting, fever, palpable mass, and guarding. Three of the 16 patients had had recurrent symptoms over a period of months to years.

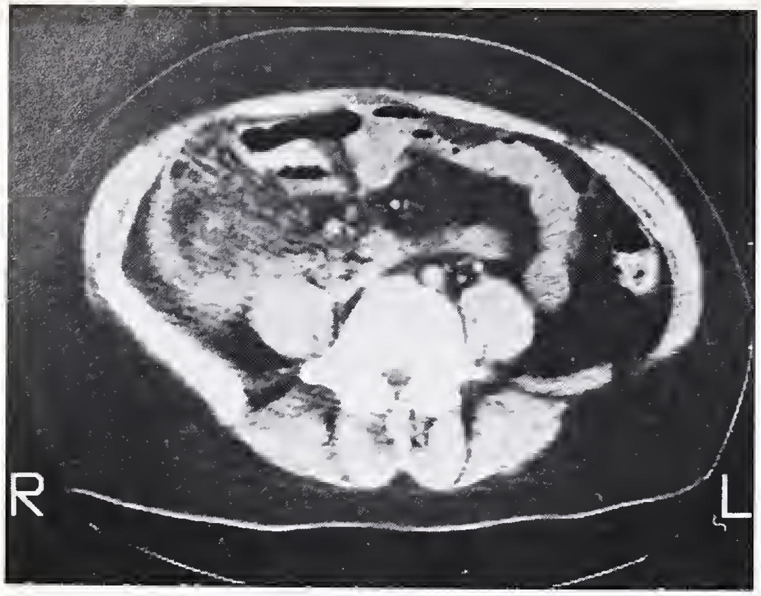

Fig 1A. Extensive soft tissue inflammatory infiltration of the mesenteric fat ("dirty fat") in the right lower quadrant, with thickening of the fascial plane laterally.

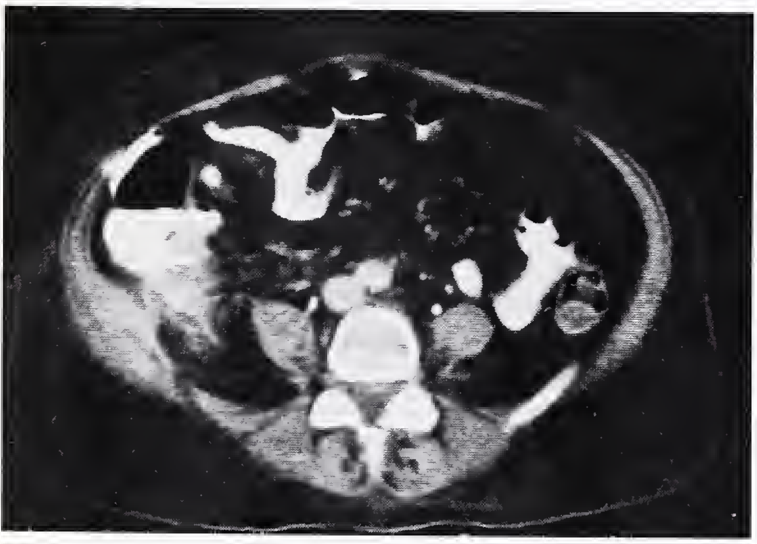

Fig 2. CT scan at the level of the cecum demonstrates a thickened lateral abdominal wall, tenting of the right psoas muscle, cecal wall indented medially by a soft tissue mass and/or thickening, thickening of the posterior bowel wall, and "dirty" mesenteric fat.

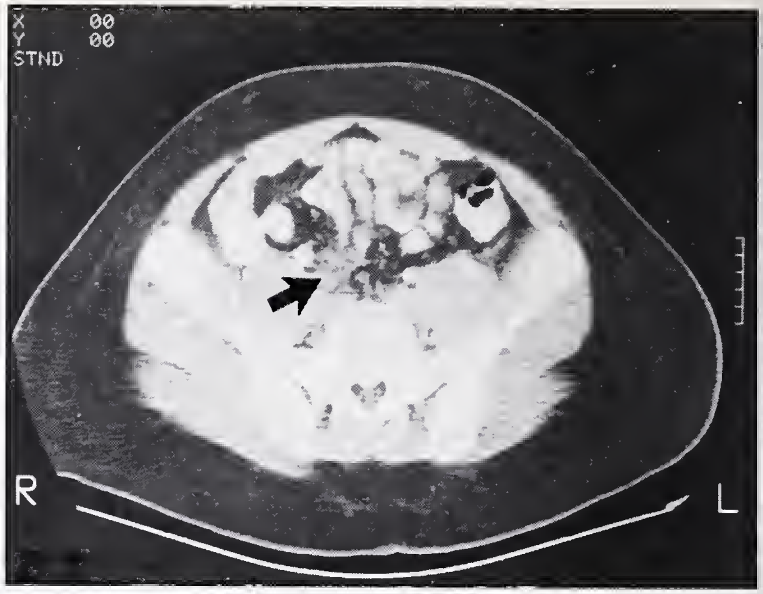

Fig 1B. Slight soft tissue inflammatory infiltration just anterior and medial to the right psoas shadow (arrow).

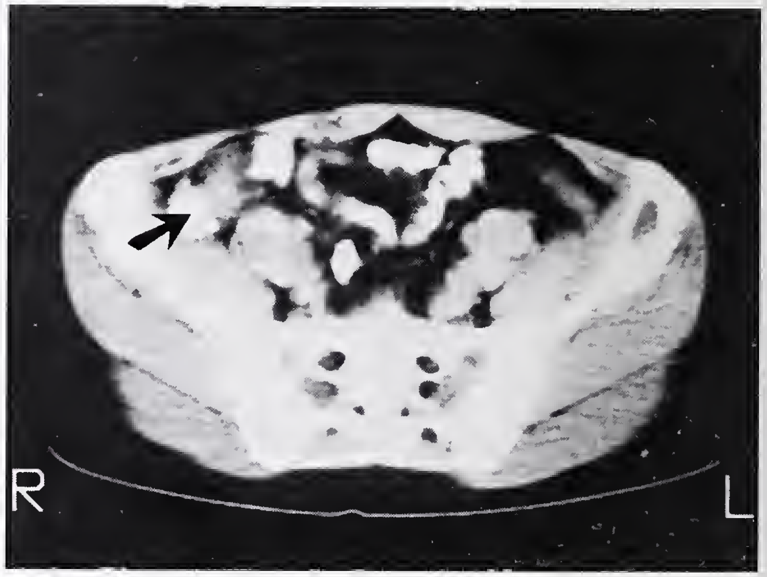

Fig 3. CT demonstrates a soft tissue mass (arrow) medial to the contrast-filled cecum with surrounding "dirty" mesenteric fat.

A BE was performed on nine patients, and eight of these procedures rendered findings compatible with the diagnosis of appendiceal disease. Four patients underwent an ultrasound examination, and only two of these patients showed positive findings of a mass without other changes.

The most common CT finding was irregular, linear or nodular soft tissue densities in the mesenteric fat, or "dirty fat," occurring in 14 of the 16 cases, or 88% (Figs 1-8). This was most commonly seen posteriorly in relationship to the right colon and somewhat medial. The next most common finding, in 13 cases (81%), was a soft tissue thickness or mass in the area of the appendix (Figs 2, 3, 4, 7). Again, this was usually located posterior and somewhat medial in respect to the colon. An indented cecum was seen frequently, in 11 cases (69%) (Figs 2, 4). This indentation occurred posteriorly and medially in the right colon. Colonic bowel wall thickening was seen in seven patients, or 44% (Fig 2) and was located posteriorly and medially. Normal wall thickness is 3mm to 5mm.[1] Fascial thickening was seen posteriorly and laterally in six cases (38%) (Figs 1, 5). In five patients (31%), abdominal wall thickening occurred laterally (Fig 2). Peritoneal fluid was seen in three of 16 patients (19%), and two of these patients had appendiceal perforation (Fig 6). One patient had free fluid in both the abdomen and pelvis, and two patients had only pelvic fluid. Focal findings compatible with an abscess and/or extraluminal gas, one with extraluminal gas only and two with an abscess containing gas, were identified in three cases, or 19% (Fig 8). A thickened appendix was difficult to interpret and was seen in only two cases (13%) (Fig 7). No calcified appendicoliths were identified on CT, and only one was found at surgery. Oral barium in the gastrointestinal tract simulated small calcifications on the CT films.

Intravenous contrast enhancement was detected

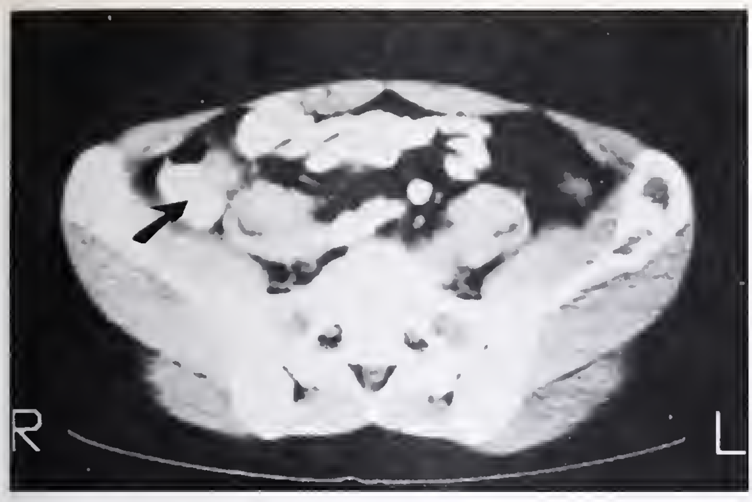

Fig 4A. There is indentation of the contrast-filled cecum in the right lower quadrant by a round soft tissue mass/thickening (arrow) with adjacent "dirty" mesenteric fat.

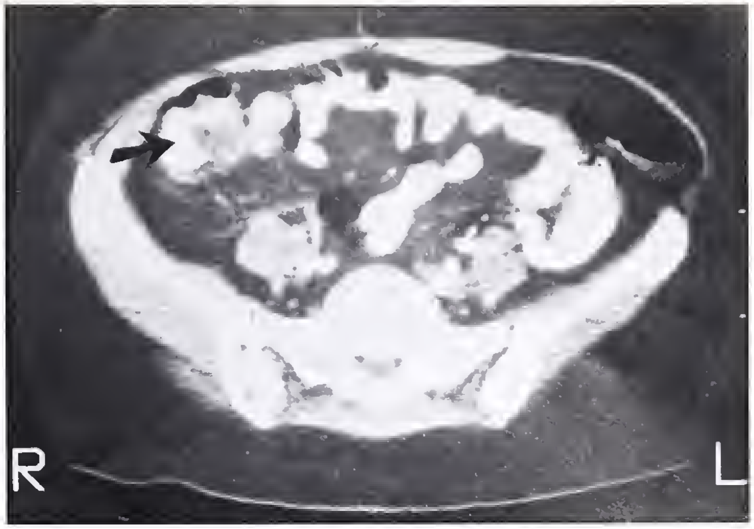

Fig 4B. Similar indentation of the contrast-filled cecum in the right lower quadrant by a rounded soft tissue mass/thickening (arrow) with adjacent "dirty" mesenteric fat.

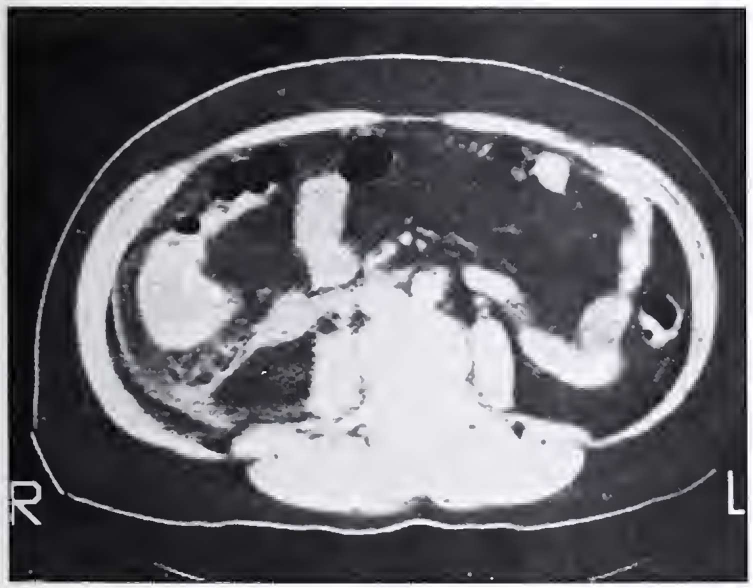

Fig 5. Inflammation has resulted in thickening of the right lateral, anterior and posterior pararenal fascia with accompanying "dirty" mesenteric fat.

in six of the 10 patients who received the injected contrast medium. Four staff radiologists who were consulted reached the following conclusions:

1. Enhancement can be seen in the area of inflammation.
2. The abnormality on the CT could have been seen without intravenous contrast.
3. In the one patient who underwent both pre- and post-contrast CT examinations, enhancement may have been present in the area of interest, but the findings were positive even without contrast enhancement.

The date of the patient's CT examination was correlated with CT findings, date of symptom onset and date of surgery. There was no correlation between the CT findings and the time interval between symptom onset and CT date. Symptom onset varied from the same day as the CT to 2½ weeks before the CT. There was a range of time between symptom onset and surgery ranging from no delay to 12 weeks' of delay. Similarly, the time interval between the date of the CT and the date of the surgery ranged from no delay to eight weeks' delay.

Three of our 16 cases were unusual. One woman had a right inguinal hernia. A BE disclosed an extrinsic process about the cecum that could have been compatible with appendicitis. A CT examination confirmed an inflammatory and/or neoplastic process in the right lower quadrant extending from the hernia area. This patient had a strangulated appendix in the hernia with necrotizing appendicitis. Another patient had a perforating carcinoma of the cecum which obstructed the appendix, causing appendicitis.

The third patient, who had been on antibiotics for one week prior to his CT scan, had a right upper quadrant cecum in which there were confusing clinical findings. This CT examination demonstrated questionable surrounding mesenteric irregularities that could have indicated adjacent inflammatory change, but is included as the only CT scan of the sixteen cases with negative results because the minor findings were indefinite.

Discussion

Appendicitis most frequently presents with signs and symptoms which are typical of the disorder and can be confirmed with simple clinical and laboratory studies. However, the diagnosis may be delayed or missed in a patient with minimal, atypical, or unusual manifestations, especially in the elderly. Similarly, other disease processes can mimic appendicitis. It is notable that between 15% to 59% of the patients undergoing surgery for possible appendicitis have normal appendices.[2, 3] This diagnostic error rate is highest in women of childbearing age. Furthermore, there has been no decrease in the incidence of negative appendectomies in the adult population over the last two decades.[4] More preoperative assessment may be indicated.

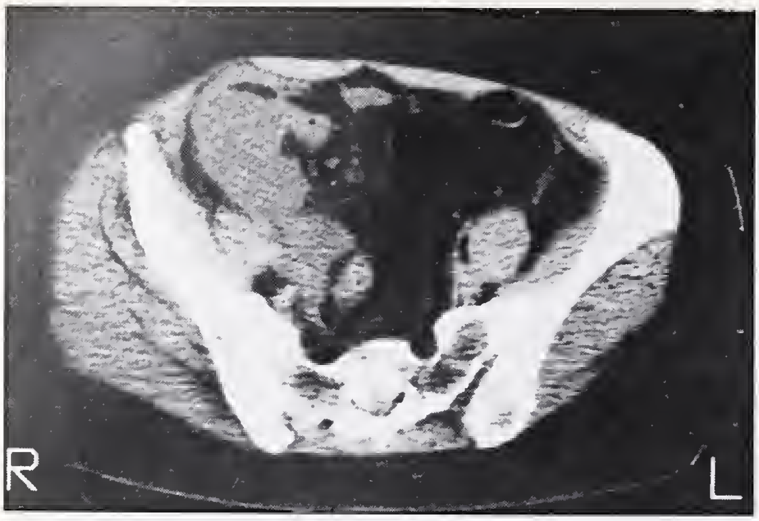

Fig 6A. Peritoneal fluid is collecting in the right lower quadrant.

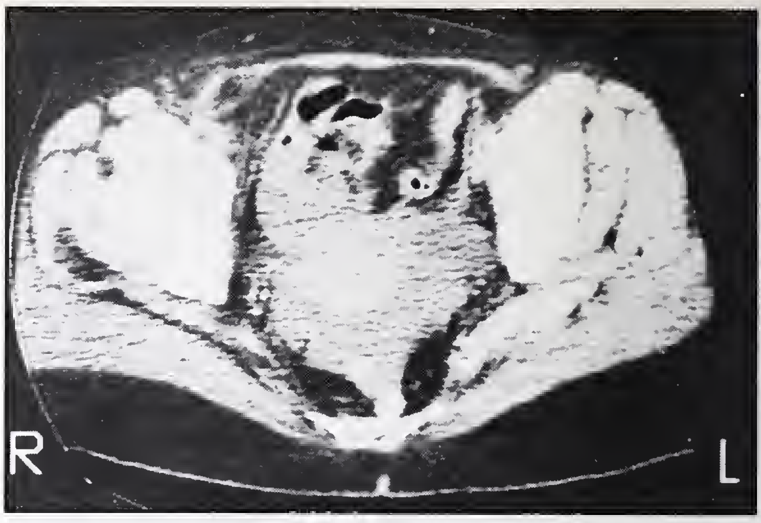

Fig 6B. In the same patient, pelvic fluid collection is observed in the pouch of Douglas and lateral pelvic recesses surrounding the uterus and anterior to the rectum.

Early diagnosis of appendicitis is important because morbidity and mortality increase with diagnostic delays and extension of the disease process. The appendix ruptures in 25% of patients with acute appendicitis, with the highest rate in the youngster and elderly.[5] Morbidity is approximately 13%, similar to the morbidity of patients with negative laparotomies. Mortality ranges from 0.1% in simple appendicitis, to 13% in patients with appendiceal abscess.[6, 7] All of these above mentioned factors can lead to unnecessary surgery and inappropriate therapy which can raise medical costs and increase loss of work days for patients.

When there is doubt about the diagnosis, or when confirmation is needed, the BE has proved useful. This can be done quickly with minimal risk and without a complete bowel preparation. The classical BE findings that indicate appendicitis include non-filling of the appendix, associated with pericecal inflammatory change or extrinsic mass effect; all are indirect findings. The BE study can exclude appendicitis as the diagnosis, or identify some other explanation of the patient's abdominal symptoms.

The BE examination, however, is not without its drawbacks.[8] In 5%-10% of normal patients, the appendix will not fill completely and therefore, nonfilling may not be a reliable sign. Furthermore, the inflammation may be at the tip of a long appendix, giving the appearance of a barium-filled appendix when in fact, it is only incompletely filled. The indirect findings of appendicitis are nonspecific and may be seen in a variety of other conditions. A relatively low sensitivity in diagnosing appendicitis by BE in the elderly was found in a recent study.[9] In our study, nine of our patients underwent BE examination, and eight had findings consistent with appendicitis. Our findings are similar to those of Jones et al, who conducted CT studies on a group of patients with appendiceal abscesses.[7]

When further confirmation is needed, or findings need clarification, CT has been and can be useful.[10, 11] This scan can differentiate among soft tissue densities. It gives excellent spatial resolution in the abdomen, and can differentiate mural from extrinsic processes as well as demonstrate whether involvement is intra- or extra-peritoneal. It can locate unexpected sites of inflammation — important because the appendix can lie in many areas. Furthermore, it can provide excellent preoperative guidance for the surgeon or the invasive radiologist who may drain an abscess.[12] It can distinguish between a liquefied abscess and phlegmon. Therefore, CT should be considered in the evaluation of questionable appendicitis, possibly replacing the barium enema, because it can contribute abundant information and demonstrate the extensiveness of the disease.

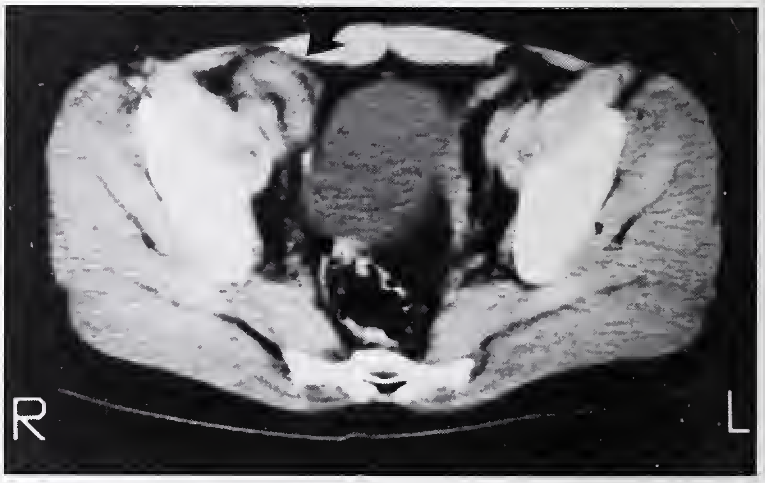

Fig 7. Contiguous CT slices demonstrated this tubular soft tissue mass, which represented a thickened appendix (arrow). Note surrounding "dirty" mesenteric fat.

Much has been written about abdominal CT and its use in visualizing inflammatory processes. Most of the literature regarding the appendix has centered on diagnosis and imaging of appendiceal abscesses, and secondarily about appendicitis.[13, 14] Abscesses can accurately be diagnosed by CT when they show mass effect with displacement of adjacent bowel, enhancing rims, well-marginated walls, low-density centers, and the presence or absence of extraluminal gas. A phlegmon, in contrast, shows a soft tissue mass with-

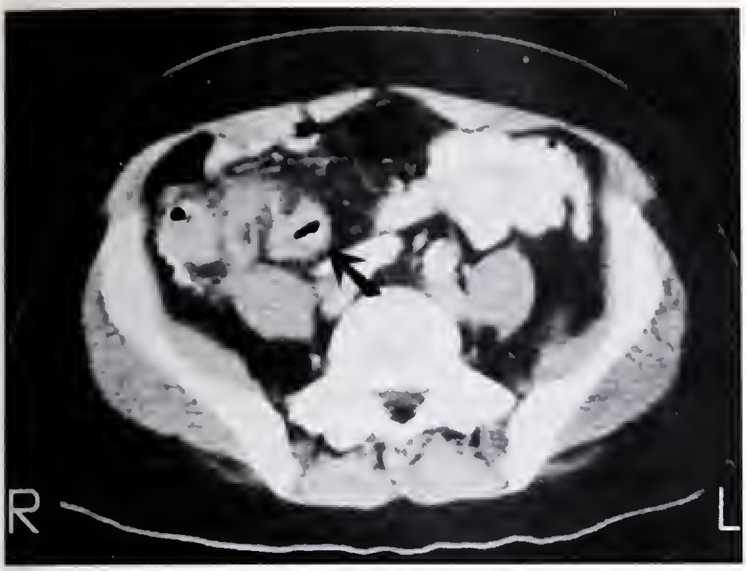

Fig 8A. There is extensive "dirty" mesenteric fat in the right lower quadrant with flattening of the psoas shadow and separation of bowel loops. Note extraluminal gas (arrow) at the anterior edge of the mesenteric inflammation.

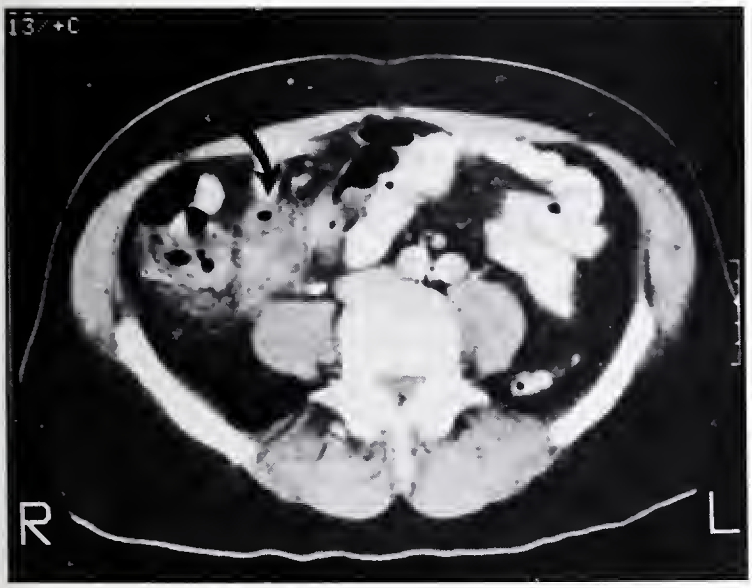

Fig 8C. Also in the same patient, bowel wall thickening of the distal ileum (arrow) with associated "dirty" mesenteric fat, separation of bowel loops and deformity of the right psoas.

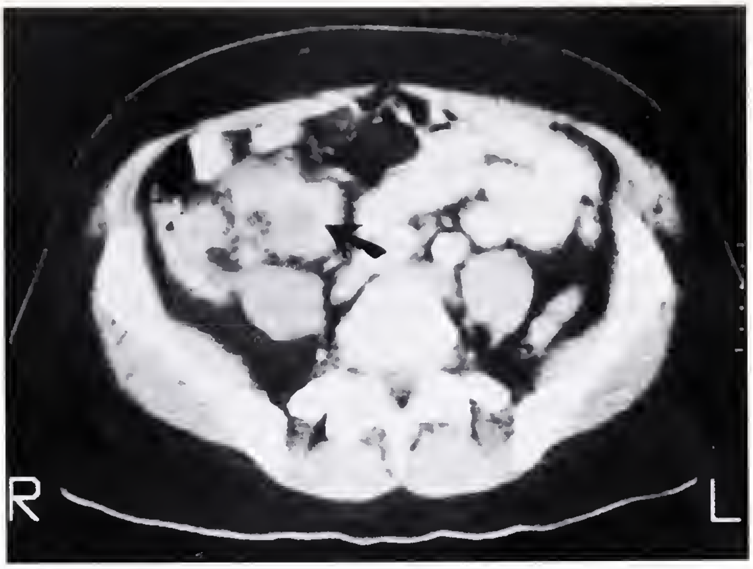

Fig 8B. A second CT slice from the same patient shows a soft tissue mass with low-density center (arrow), indicating an abscess. Also note the "dirty" mesenteric fat, separation of bowel loops and deformity of the right psoas. There is bowel wall thickening of the medial aspect of the displaced right colon.

out low-density areas or gas bubbles. Only two of our 16 patients with appendicitis had a formed appendiceal abscess. The cases of appendiceal abscess studied by Jones and Scatarige not only showed masses, but four patients in each study of 15 total patients demonstrated appendicoliths with both ring-like and solid calcification.[7, 9] Stone formation is known to be associated with an increased risk of gangrene or perforation of the appendix. These calcifications are frequently easier seen on CT than on plain films. Interestingly, none of our patients showed calcification on CT examination, and only one was found at surgery.

Besides demonstrating mass or abscess-like changes and calcification in the right lower quadrant, other findings have been observed in appendiceal abscess. These CT findings depend to some extent on the location of the appendix when inflamed. Abscesses may be demonstrated in the pelvic, subdiaphragmatic, interloop, subhepatic, paracolic and pericecal areas. Fascial plane thickening with lack of definition of adjacent fascia and muscles, fluid collections, bowel wall thickening, small bowel thickening, small bowel obstruction, obliteration of abdominal fat, thickening of the mesentery, mesenteric adenopathy and thickening of abdominal muscles have all been reported. Our cases of appendiceal abscess showed similar findings.

However, when a focal, walled-off abscess has not yet developed, appendicitis and reactive inflammatory changes can produce similar alterations that can be detected on CT. The most common finding in our series of cases was a change in the mesenteric fat with soft tissue haziness, thickening and fingerlike projections — referred to as "dirty fat." This is due to the inflammatory reaction extending from the appendix into adjacent structures. This finding was seen in all of our cases, although questionable in one patient. This finding has been previously reported and is usually discovered posterior and medial to the right colon, eccentrically involving the cecum. Similar to abscess formation, a soft tissue mass or soft tissue thickening displacing bowel (especially right colon and terminal ileum) or bladder, and sometimes distorting the psoas muscle may be seen. Indention of the cecum, colonic wall thickening (greater than 3 to 5mm), fascial thickening and abdominal wall muscle thickening can also be identified. Fascial thickening was usually seen in patients with perforation and abscess formation and represents the extension of the disease process toward adjoining tissue planes and spaces. Patients with peritoneal fluid accumulation proved to have perforated appendices. Tubular soft tissue shadows contiguous with the cecum indicated a thickened, swollen appendix. Circumferential symmetrical thickening of the wall of the appendix has been reported.[15] Extraluminal gas was only seen in our patients with abscess and perforated appendix. In contrast to Haaga's findings, we found no stones by CT examination in any of our cases of appendicitis.

Intravenous contrast has been shown to enhance the CT appearance of normal and abnormal body tissues, better define tissue planes, and enhance rims of abscesses. Most of our patients who received contrast medium did show enhancement of their CT scans, but our radiologists indicated that the contrast was not necessary, as the films obtained without contrast rendered sufficient findings to make a positive diagnosis of appendicitis. In the one patient who had both non-contrast and contrast-enhanced scans, the diagnosis could have been made without the enhanced scan.

Computed tomography can be helpful in evaluating patients with appendicitis-like symptoms. Our small study shows that CT is sensitive (in 15 of 16 cases) for visualizing abdominal abnormalities of appendicitis. However, inflammation confined only to the appendix may not be detected by CT, and a negative study does not exclude appendicitis.[16] Although many of the radiographic signs of appendicitis are nonspecific, an accurate diagnosis can be made when the CT findings are correlated with signs and symptoms, laboratory tests, and barium enema findings. Furthermore, CT can not only confirm or refute the diagnosis in which there is clinical doubt, but can exclude other possibilities and define the extent of disease. Use of CT studies may lower the high incidence of negative laparotomies. The CT scan should, therefore, be considered in patients with appendicitis-like symptoms, possibly in place of the barium enema. It may be helpful in planning the type (surgical or CT-guided drainage), time and location of surgery, which should reduce morbidity and mortality. The CT scan could also allow non-invasive follow-up of those patients who are poor operative risks and have been treated conservatively with antibiotics.

Author's note: Since completion of this article, we have found two more cases of appendicitis diagnosed by CT preoperatively.

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Clinical Uses for Interferon in the Treatment of Cancer

A Critical Review

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Two types of alpha interferon are available in the United States for the treatment of human disease, thanks to recombinant DNA technology. Originally introduced with the promise of a cure for all cancers, interferon has been proven effective in only a limited number of uncommon malignancies.

Soon after the discovery of interferon in 1957, this naturally occurring glycoprotein was found to possess anti-proliferative activity and held great promise for the treatment of malignant disease.[1] In June 1980, the production of interferon using recombinant DNA technology was perfected, permitting the production of large quantities of interferon for clinical cancer trials. Since then, many studies have been published reporting the activity of interferon in a variety of cancers, leading to the FDA's release of interferon as an available drug in June, 1986.

Interferon represents the first of what is sure to be an increasing number of genetically engineered biological response modifiers. These substances, such as interferon, interleukin, tumor necrosis factor, and others, may expand the clinical role of immunotherapy in cancer treatment. However, "Show Me" State physicians may view such fanfare with skepticism. This article undertakes a critical review of recombinant alpha interferon, the first of these immunological agents to be released for the treatment of cancer.

Although at least 14 varieties of alpha interferon have been isolated,[2] only four types of alpha interferon have been produced by recombinant DNA technology (Table 1),[3] and two of these have been released in the United States for use in the treatment of human disease: alfa 2-a (Roferon-A) and alfa 2-b (Intron-A). They are identical except for a single amino acid substitution.[3] Thus, for the purposes of this review, the clinical results observed with one of these compounds should be identical to the results expected for the other agent.

Mechanism of Action of Alpha Interferon

Interferons have pleotrophic biological activities including both anti-proliferative and immunomodulatory effects. Within five to ten minutes of binding to cell surface receptors, interferon stimulates the production of ribonucleases and other enzymes which inhibit tumor cell growth.[4] In contrast to conventional antineoplastic agents, interferon does not inhibit DNA production. Consequently, the activity of interferon is predominately tumorstatic rather than tumoricidal.[2]

In addition to inhibiting cell growth, interferon may have an immunomodulatory effect by enhancing the host immune system's ability to combat the cancer. Interferon increases the cytotoxic activity of natural killer (NK) lymphocytes,[5] enhances macrophage phagocytosis,[6] augments B cell function, immunoglobulin production,[7] and monocyte activation,[5] and alters helper and suppressor T-cell subpopulations.[5] Interferon alters cell surface antigens, increases expression of cell surface receptors, and increases tumor cell charge.[8]

One of the newer and most interesting discoveries is that interferon inhibits the expression of oncogenes.[9, 10] Tumor progression and differentiation is the result of successive activation of oncogenes,[11] somatic genes which may regulate cell growth and proliferation.[10] In some malignant conditions, the activation of an oncogene results in the excess production of growth factors that may stimulate cancer growth and increase cancer virulence.[11] Interferon reverses the oncogene-induced changes in some malignant tis-

Table 1

Classification of Recombinant Alpha Interferon

Name	*Trade Name (Manufacturer)*	*Peptide Sequences*	
		Positon 23	*Position 34*
alfa-2a	Roferon-A (Roche)	Lys	His
alfa-2b	Intron-A (Schering)	Arg	His
alfa-2c	(Boehringer Ingelheim)	Arg	Arg
alfa-N1	(Burroughs Wellcome)	significant differences	

sue cultures[9] by reducing oncogene-related tumor growth factors.[10]

Toxicity of Interferon

The common side effects of recombinant alpha interferon appear in Table 2. In contrast to the gastrointestinal and myelosuppressive side effects of conventional chemotherapy, the most frequent side effects with interferon therapy are flu-like symptoms: fever, malaise, fatigue, chills, anorexia, headache, myalgia, and arthralgia.[5] These symptoms are dose-related but may diminish with repeated exposure.[12] Flu-like symptoms are usually well tolerated at doses of 3 to 10 megaunits/m^2 (million units/m^2), however, they can become dose-limiting in patients treated with 30 to 50 megaunits/m^2.[13, 14] These side effects may be exacerbated by aspirin and non-steroidal anti-inflammatory drugs. Fever, myalgia, and arthralgia may be ameliorated with acetaminophen.

Other common but reversible effects include myelosuppression, hepatic toxicity, and neurotoxicity. Reversible myelosuppression is caused by inhibition of myeloid maturation[15] and impaired marrow release of mature granulocytes.[5] This effect can be clinically significant in those patients with hematologic malignancies and in patients with bone marrow metastases.[16] Sepsis, opportunistic infections, and neutrophil counts less than 2,000/mm^3 are rare.[12] Neutropenia resolves within one or two days.[5] Thrombocytopenia is rare, but five cases of immune-mediated thrombocytopenia have been reported.[17]

Transient hepatitis with elevation of serum alkaline phosphatase and serum transaminases is common but resolves within three to seven days following drug cessation.[5] Cardiovascular side effects (hypotension, hypertension, or tachycardia) occur in 14% of patients.[3] A higher incidence is observed with intravenous doses, with subcutaneous doses exceeding 20 megaunits/m^2, and in elderly patients or in patients with a prior history of heart disease or arrhythmias.[3] There is no convincing evidence to indicate that interferon is directly cardiotoxic or arrythmogenic.

Neurotoxicity, though reversible, can be severe and dose-limiting. Mild neurotoxicity may occur in nearly all patients.[18] Paresthesia, motor weakness, confusion, dysarthria, and loss of short-term memory occur predominantly in patients treated with doses exceeding 50 megaunits.[18] Electroencephalographic (EEG) changes are nearly universal regardless of symptoms.[18] These EEG abnormalities occur six to eleven days after initiation of interferon therapy and resolve two to three weeks after cessation of therapy.[18]

Table 2

Toxicities of Alpha Interferon
(References: 3, 5)

	Frequency (%)
Flu-like Symptoms	
Fever	84-90
Chills, rigors	55-62
Malaise, fatigue	30-52
Anorexia	29-49
Headache	36-56
Myalgia, arthralgia	25-22
Myelosuppression	
Neutropenia	32-56
Thrombocytopenia	18-31
Hepatic	7-9
Cardiac	14
Central nervous system	5-22

Therapy

In the last five years, numerous reports have appeared in the medical literature reporting the activity of recombinant alpha interferon in the treatment of cancer. To physicians unfamiliar with the cancer literature, interferon might appear to be a major advance in cancer therapy. Unfortunately, the tumors which respond to interferon are relatively uncommon. Table 3 lists the frequency of selected cancers reported to the Missouri Cancer Registry in 1985, the most recent year for which complete information is available. Recombinant alpha interferon is not effective in treating the five cancers that account for nearly two-thirds of all cancer cases reported in the State of Missouri. The remainder of this review will focus on several cancers in which interferon therapy may be effective.

Malignant Lymphomas

There were 642 cases of malignant lymphoma (Hodgkin's disease and non-Hodgkin's lymphoma) diagnosed and reported in Missouri during 1985. Many of these were Hodgkin's disease or intermediate to high-grade non-Hodgkin's lymphomas. For these histological types, curative radiotherapy or combination chemotherapy is available. For the low-grade histological types and for some types of T-cell lymphoma, however, combination chemotherapy is less effective.

In contrast, interferon has very little activity in Hodgkin's disease, intermediate and high-grade non-Hodgkin's lymphomas. But many responses have been reported in the low grade, indolent histology (B-cell) and the cutaneous (T-cell) non-Hodgkin's lymphomas.

Table 3

Reported Cancer Cases in Missouri
Source: Missouri Cancer Registry

Selected Cancers for Which Interferon Is Ineffective	*Number of Reported Cases (1985)*	
Lung cancer	3,015	
Colorectal cancer	2,841	
Breast cancer	2,649	
Prostate cancer	1,579	
Uterine cancer	1,406	
Subtotal	11,490	(62.7%)
Selected Cancers for Which Interferon May Be Effective	*Number of Reported Cases (1985)*	
Malignant lymphoma	642	
Renal cell carcinoma	384	
Malignant melanoma	218	
Multiple myeloma	166	
Hairy cell leukemia	7	
Subtotal	1,417	(7.7%)
ALL OTHER SITES	5,432	(29.6%)
Total	18,339	(100%)

Data provided by Dr. Jiang Chang and the Missouri Cancer Registry.

Low-Grade Lymphomas

The low-grade non-Hodgkin's lymphomas follow an indolent clinical course with the median survival exceeding seven years.[19] Although treatment with single-agent or combination chemotherapy may induce a complete or partial remission, overall survival remains unaltered.[19] Interferon induces a 50% partial and complete remission rate in some types of low-grade lymphomas.[20, 21] This remission rate is similar to that observed with chemotherapy; however, the median duration of remission may be shorter (average 26+ weeks).[22] Interferon has been safely administered in combination with chemotherapy, and prospective randomized clinical trials to compare combination therapy with interferon and chemotherapy to chemotherapy alone have begun.

T-cell Lymphomas

The cutaneous T-cell lymphomas (mycosis fungoides and Sezary's syndrome) may be refractory to conventional chemotherapy in advanced stages. These lymphomas are responsive to interferon therapy. Bunn[23] treated 20 patients with 50 megaunits/m^2 three times weekly and reported a partial remission rate of 45% with remissions lasting between three and 25 months (median five months). Olsen reported 20 patients with newly diagnosed or refractory T-cell lymphoma treated with three to 36 megaunits by daily intramuscular injection. After at least four weeks of therapy, 70% had an objective tumor response.[24]

Renal Cell Carcinoma

Renal cell carcinoma (hypernephroma) was diagnosed in at least 384 Missourians in 1985. At least one-third of these patients presented with metastatic disease at the time of presentation, and half of the remaining patients can be expected to die from metastatic disease. Unresectable or metastatic renal cell carcinoma is relatively resistant to hormonal therapy and chemotherapy. Clinical responses occur in fewer than 10% of patients.[25, 26] Recombinant alpha interferon produces partial response rates which may range between 11% and 26%.[27, 28] Although a clear dose-response relationship has not been established, a single randomized trial which compared low dose (2 megaunits/m^2) therapy to high dose (20 megaunits/m) therapy showed a superior clinical response rate for the higher dose.[29] A compilation of the results from many clinical trials would suggest that a dose of five to ten megaunits/m^2 three times weekly may be sufficient to achieve acceptable response rates.[30] Interferon has been used in combination with chemotherapy agents. The combination of vinblastine and interferon has been reported in three separate studies to produce response rates of 13%,[31] 31%,[32] and 44%.[33] The reported success of another immunotherapy, interleukin-2 with leukocyte-activated killer cells, with partial remission rates exceeding 50%,[34] has overshadowed the results observed with alpha interferon. Similar to studies with interleukin-2, interferon may induce a higher response rate among patients who have undergone nephrectomy.[30] This could, however, be the result of an improved performance status and other favorable prognostic factors observed in the patients who survive a major surgical procedure.

Malignant Melanoma

Malignant melanoma is a leading skin cancer killer, with a 1985 annual reported occurrence in Missouri of 218 cases. The incidence and mortality of melanoma is growing faster than any other cancer except for lung cancer in women.[35] Although early-stage tumors may be cured with surgical excision, there is no effective treatment for metastatic melanoma and no known effective adjuvant therapy.

Although several studies have reported both complete and partial remissions in metastatic malignant melanoma,[36-39] response to interferon therapy would not appear to exceed the response rate observed with conventional chemotherapy.[40] Many of the responses are observed in patients with cutaneous, soft tissue, and pulmonary metastases[39, 41] and up to one-third of these remissions may be complete and long-lasting.[42] These most favorable remissions are rarely reported in patients with metastases to the liver and brain.[36] A dose response relationship has not been determined[37, 38, 43] and doses which have demonstrated clinical activity may range between three to 50 megaunits/m^2 daily or thrice weekly.[36, 38, 39] Prior treatment with chemotherapy does not appear to influence the chances for response[36]; consequently interferon can be considered a treatment alternative for patients who have relapsed following conventional chemotherapy.

As interferon monotherapy does not induce significant complete remission rates or improve survival, combination therapy and intralesional therapy have been explored. Interferon combined with cytotoxic chemotherapy[44] and interferon with cimetidine[44, 45] produce remission rates similar to that observed with interferon monotherapy. To date, no prospective randomized trial has been published which demonstrates that a combination of chemotherapy and interferon is more effective than either therapy alone. Intralesional treatment with recombinant alpha interferon has been tested[46]; the most dramatic remissions occur only at the injected sites. Thus intralesional interferon may be an alternative to local excision or radiotherapy in recurrent cutaneous melanoma.

With limited activity in metastatic melanoma, it seems unlikely that interferon would be beneficial as an adjuvant treatment following surgical excision. Nevertheless, this hypothesis is currently being explored in a prospective clinical trial.

Multiple Myeloma

Multiple myeloma, a malignant proliferation of plasma cells, accounted for 166 reported cancer cases in Missouri in 1985. Myeloma is treated with combination chemotherapy, and 50%-70% of patients respond to treatment.[47] Despite this high response rate, complete remission is uncommon and the average time to relapse is about one to two years.[47] Second-line chemotherapy is usually ineffective.

Interferon has been tested in relapsed or refractory patients, in newly diagnosed patients, and in combination with chemotherapy. In relapsed patients, interferon produces responses similar to second-line chemotherapy. Partial response rates are between 15% and 26%.[48, 49] In refractory cases (patients who have failed to respond to initial chemotherapy), the response rate is still lower — 11%.[48] Those patients who respond appear to have a longer duration of response than might be expected with second line chemotherapy[48]; however, there is no randomized prospective clinical trial that has compared the duration of response for either interferon or chemotherapy among refractory cases.

Interferon is not an optimal single agent therapy for newly diagnosed myeloma. A prospective randomized trial comparing single-agent interferon to combination chemotherapy with vincristine, melphalan, cyclophosphamide, and prednisolone reported a response rate to interferon of 43% and to combination chemotherapy of 89%.[50]

Interferon is effective when given in combination with conventional chemotherapy. Cooper has shown that low-dose interferon and chemotherapy can be safely combined with an observed response and median response duration similar to that expected with conventional therapy.[51] A prospective randomized clinical trial comparing a sequence of interferon followed by melphalan and prednisone, to melphalan and prednisone alone is now being conducted. It is postulated that this combination therapy would increase the median duration of response.

Hairy Cell Leukemia

Hairy cell leukemia is a rare hematologic malignancy. Only seven new cases were reported in Missouri in 1985. Most patients are elderly men who present with pancytopenia, splenomegaly, and "hairy" lymphocytes found on the peripheral blood smear.[52]

Hairy cell leukemia may be treated with splenectomy, interferon, or chemotherapy. Splenectomy relieves symptoms related to splenomegaly, reduces the tumor burden, eliminates sequestration of blood cells in the enlarged spleen, and results in improvement in blood counts in up to 90% of patients.[53] Although it remains an important therapeutic consideration for patients with this disease,[54] approximately 50% of patients have disease progression following splenectomy.[55]

Interferon is effective in newly diagnosed patients and in patients who relapse after splenectomy. Ninety percent of patients treated with low doses of interferon (2 to 3 megaunits daily or thrice weekly) respond with normalization of peripheral blood counts, reduction in bleeding and infection, and reduced need for transfusion.[54, 56-58] After six to nine months of therapy, most patients have a significant reduction in the number of hairy cells present in the bone marrow; however, very few patients have been reported to have achieved complete remission with complete elimination of hairy cells from bone marrow biopsy.[54] A higher complete remission rate (17%) has been observed among non-splenectomized patients,[56] but this observation has not been confirmed by other investigators. It may take up to six months of therapy to achieve maximal response.[54] Following one year of therapy, interferon may be discontinued in responding patients. More than half of the patients will remain in clinical remission for over 30 months.[54] However, interferon therapy is not curative and the proportion of bone marrow hairy cells generally increases shortly after patients discontinue interferon treatment.[54]

Epidemic Kaposi's Sarcoma

Epidemic Kaposi's sarcoma (EKS) is an uncommon cutaneous malignancy associated with the acquired immunodeficiency syndrome (AIDS). Although EKS is rare in Missouri, its incidence is projected to increase in relation to the AIDS pandemic. Several investigators have reported complete and partial remissions of EKS in patients treated with recombinant alpha interferon,[59, 60, 61] A dose-response relationship exists: low-dose therapy (3 million units) is ineffective; the optimal dose may be 36 to 50 million units three times a week.[59] Response has been correlated with T-cell immune function; patients with intact T-cell function exhibit a higher response rate to interferon therapy.[62] Unfortunately, interferon is ineffective in restoring T-cell function or increasing the number of helper T-cells.[60] Interferon therapy does not alter the overall survival of EKS or AIDS victims.[60] Combination therapy with interferon and chemotherapy has been investigated with varying results,[63, 64] but there is no convincing evidence that combination therapy is more effective.[65]

Conclusions

Interferon is the first recombinant biological response modifier to be released for the treatment of malignant disease. In the future, other agents (other interferons, interleukins, lymphokines, and tumor necrosis factor) may also be released for treatment of cancer. Recombinant alpha interferon cannot be considered a panacea for cancer treatment. Its efficacy is limited to a few, unusual cancers, and the effective dose may range from relative small, innocuous levels (two megaunits thrice weekly) to substantial, toxic, costly levels. Interferon is unlikely to supplant existing cancer treatments (surgery, radiotherapy, and chemotherapy), and further investigation is needed to explore the role of this agent in combination with other cancer treatments.

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Gemfibrozil Therapy in Patients with Coronary Heart Disease

Hubert Bell, M.D., Georgia Dittmeier, R.N., and Lisa Martinez
Kansas City, Missouri

In 58 patients at risk for coronary heart disease — 43 with confirmed disease — therapy with gemfibrozil improved serum lipoprotein profiles in 80%. The use of the drug effected a greater change than that observed from diet and exercise measures undertaken by patients immediately prior to their enrollment in the study.

The role of high-density-lipoprotein (HDL) cholesterol in prevention of coronary arteriosclerosis has been well established by epidemiologic studies.[1, 2] An increase in HDL of only 10 mg/dL is associated with a 50% decrease in coronary risk.[3] A Framingham study of 2,815 men and women older than 49 years of age established that the major lipid risk factor for coronary heart disease was HDL cholesterol. There was a strong inverse relationship; persons with low HDL cholesterol levels were at higher risk than persons with high levels of HDL.[2] Furthermore, a ratio of HDL to total cholesterol (HDL/CHOL ratio) below 0.20 has been shown to be associated with premature coronary artery disease.[3, 4]

Numerous prospective studies suggest that hyperlipidemia in patients with coronary heart disease should be treated with medication.[5, 6] Many of the available lipid-altering drugs, e.g. cholestyramine, colestipol and probucol, are clinically useful because they lower low-density-lipoprotein (LDL) cholesterol or total cholesterol levels. However, HDL cholesterol levels are frequently unaffected or even lowered by such drug therapy.[7]

Gemfibrozil (Lopid, Parke-Davis Pharmaceuticals) has been demonstrated to lower total cholesterol and LDL cholesterol levels and to increase HDL cholesterol.[8] Much of the gemfibrozil lipid data has come from studies of "healthy" controls with abnormal serum lipids.[9] The following study was carried out on 58 cardiac patients, 43 of whom had angiographically proven severe coronary artery disease.

Methods

All patients included in the study had HDL/CHOL ratios of less than 0.20. Forty-three had undergone coronary angiographic studies that documented severe coronary artery disease. Coronary arteriogram studies were performed by the Judkins technique and coronary lesions were graded by the method of Miller.[10] Patients above age 65 were not admitted to the study. The patient population ranged from 31 to 65 years (average 55 years). There were 13 women and 45 men. Patients were classified as Type IIA (22 patients) with serum LDL cholesterol levels greater than 180 mg/dL and serum triglycerides less than 200 mg/dL, or Type IIB (five patients) with serum LDL levels greater than 180 mg/dL and serum triglycerides greater than 200 mg/dL. The remaining 31 patients demonstrated Type IV lipoprotein abnormalities with serum LDL levels less than 180 mg/dL.

Total serum cholesterol, HDL cholesterol, HDL cholesterol subfractions, serum triglycerides, and LDL cholesterol levels were measured on admission to the study and repeated after a minimum of three months on a prescribed diet and exercise program. These studies were repeated following a three-month treatment with gemfibrozil. The patients were admitted

Table 1

Serum Lipid Alterations Induced by Gemfibrozil
All Patients (58)

	*Diet and Exercise**	*Gemfibrozil**	*P*
Cholesterol mg/dL	255.9 ± 66.5	241.9 ± 56.3	<.001
HDL_2 mg/dL	6.5 ± 4.6	8.5 ± 6.1	>.05
HDL/$_3$ mg/dL	31.2 ± 7.3	33.6 ± 8.8	<.001
Total HDL mg/dL	37.7 ± 9.6	42.4 ± 9.6	<.001
HDL/CHOL Ratio	0.15 ± 0.04	0.18 ± 0.05	<.001
Triglycerides mg/dL	217.8 ± 129.1	135.0 ± 108.7	<.001
LDL mg/dL	186.6 ± 59.2	183.8 ± 55.9	>.05

*Values given are means ± SDs

to the study in equal numbers over a 12-month period to avoid the influence of seasonal rhythms on blood lipid levels.

Triglyceride levels were measured by the method of Bucolo and David,[11] cholesterol values by the method of Allain et al,[12] HDL cholesterol by the method of Grove,[13] HDL subfractions by the method of Kirstein and Carlson,[14] and LDL cholesterol by the Lipid Research Clinic method.[15] A complete history and physical examination was carried out and all patients were screened for associated disease, such as thyroid disorders or diabetes. The patients were instructed in the American Heart Association "prudent diet"[16] by one of our staff. Individualized exercise was prescribed in accordance with Dr. Kenneth Cooper's age-appropriate walking program. This exercise was performed during the initial control period and the drug treatment period. All patients were instructed to avoid smoking cigarettes. There were 12 cigarette users, none of whom stopped smoking during the study.

During the treatment period, gemfibrozil was administered in doses of 600 mg twice a day. Liver function studies were followed and patients kept a diary of symptoms for screening of possible undesirable side effects. The clinical significance of our data was determined by the student's two-tailed t test.

Results

Side effects from gemfibrozil were uncommon but included "gas and bloating" (11% incidence), diarrhea (6%), joint pain (3%), fatigue (3%), and skin rash (2%). No abnormal liver function studies were observed during the study trial period.

During the control period (diet and exercise), total serum cholesterol decreased from a mean value of 278 mg/dL to 255 mg/dL. During the same control period, HDL cholesterol levels decreased slightly from 39 to 38 mg/dL. The ratio of HDL to total cholesterol improved only slightly from 0.14 to 0.15. These changes were not statistically significant.

During the three-month treatment period with gemfibrozil, total serum cholesterol decreased in 37 of the 58 patients. The mean value fell further from 255 to 241 mg/dL. The mean HDL cholesterol increased from 38 mg/dL to 42 mg/dL. Eighty percent of patients (46/58) demonstrated an increase in HDL cholesterol during the gemfibrozil treatment period. Consequently, the HDL/CHOL ratio increased from 0.15 to 0.18 (Figure 1).

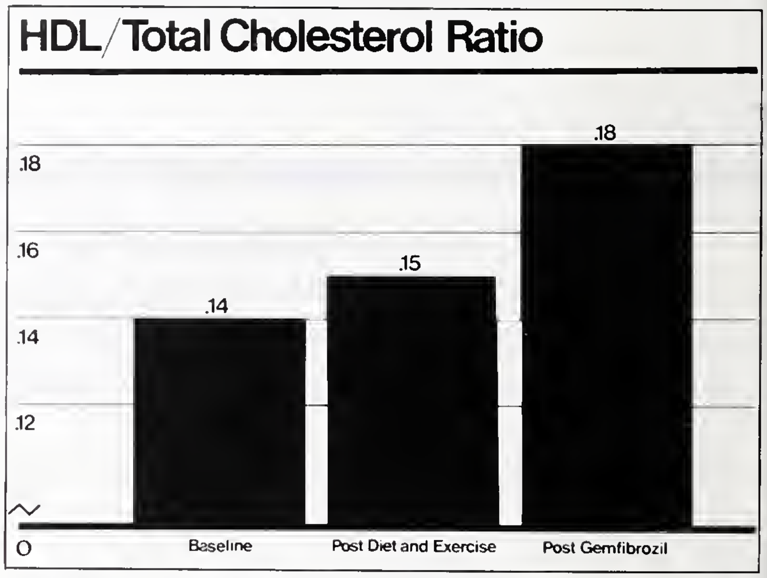

Fig 1. Effect of gemfibrozil on normalizing HDL/CHOL ratios.

Both mean HDL_2 and HDL_3 subfractions increased during the gemfibrozil treatment period, but a statistically significant increase occurred in only the HDL_3 subfraction. Serum LDL and serum triglycerides also showed reductions during the gemfibrozil treatment although the LDL decrease was not statistically significant. Type IIA and IIB subgroups showed similar results. Total cholesterol, HDL_3 cholesterol, total HDL cholesterol, HDL/CHOL ratio, LDL, and triglycerides showed significant change in the IIA subgroup. The IIB subgroup values did not show statistical significance because of the small number of patients. (See Tables 1, 2, and 3)

Discussion

The purpose of this study was to evaluate the effect of gemfibrozil on serum lipids rather than to determine effectiveness of diet and exercise as a method of normalizing serum lipoprotein abnormalities. The minimum three-month control period was used primarily to establish a baseline for measuring results of gemfibrozil therapy (a three-month period

Table 2

Serum Lipid Alterations Induced By Gemfibrozil
Type IIA (22 patients)

	*Diet and Exercise**	*Gemfibrozil**	*P*
Cholesterol mg/dL	286.2 ± 46.7	257.4 ± 55.8	<.001
HDL$_2$ mg/dL	7.9 ± 3.6	6.6 ± 1.9	>.05
HDL$_3$ mg/dL	35.1 ± 8.1	39.9 ± 8.2	<.001
Total HDL mg/dL	43.1 ± 10.1	46.5 ± 7.9	>.05
HDL/CHOL Ratio	0.15 ± 0.03	0.18 ± 0.05	<.001
Triglycerides mg/dL	167.4 ± 90.7	94.6 ± 40.4	<.01
LDL mg/dL	228.0 ± 49.8	199.1 ± 51.2	<.01

*Values given are means ± SDs

Table 3

Serum Lipid Alterations Induced by Gemfibrozil
Type IIB (5 patients)

	*Diet and Exercise**	*Gemfibrozil**	*P*
Cholesterol mg/dL	362.6 ± 107.4	339.0 ± 47.6	>.05
HDL$_2$ mg/dL	3.9 ± 1.4	10.6 ± 8.2	>.05
HDL$_3$ mg/dL	25.1 ± 8.2	26.9 ± 8.3	>.05
Total HDL mg/dL	28.8 ± 5.2	37.6 ± 7.6	>.05
HDL/CHOL Ratio	0.08 ± 0.02	0.11 ± 0.03	>.05
Triglycerides mg/dL	452.6 ± 227.0	265.0 ± 122.7	>.05
LDL mg/dL	247.0 ± 104.7	262.4 ± 63.7	>.05

*Values given are means ± SDs

of diet and exercise has been considered adequate time for a baseline control by several investigators.)[17, 18] Many of the patients had received previous dietary instructions in a low cholesterol diet and had been told to "exercise regularly." Nevertheless, our instruction did result in an 8% reduction in total serum cholesterol. It is not surprising that diet and exercise alone were unable to produce significant increases in HDL cholesterol or in the HDL/CHOL ratio. In general, dietary changes have been disappointing as a method of HDL augmentation and have influenced HDL levels mainly through weight loss. At least a 10-pound weight loss is usually required for HDL augmentation.[9, 16] Exercise can temporarily increase HDL, but requires strenuous exertion such as that performed by marathon runners in training (that is, 70 kilometers per week).[16, 19, 20] In our study, significant weight reduction did not occur, and our patients used walking rather than running for exercise. Only 27 of the 58 patients could be classified as having Type IIA or IIB lipoprotein abnormalities. Nevertheless, the remaining 31 patients did demonstrate clinical or angiographic evidence of premature coronary disease. It is possible that their accelerated atherosclerosis was due largely to their low HDL/CHOL ratios. However, some of the 31 patients may have been latent Type IIA or IIB patients who would have demonstrated typical lipoprotein abnormalities on high-fat diets.

In 1951 Barr noted that healthy men had higher levels of HDL cholesterol than men with coronary artery disease.[21] However the concept that high HDL levels are protective against coronary heart disease was initially proposed by Miller and Miller, who demonstrated that plasma HDL acts as a transport mechanism for carrying cholesterol from peripheral tissues (coronary arteries) to the liver for catabolism and excretion.[22] Many epidemiologic studies have produced evidence to confirm this hypothesis. Pooled data from case studies of 6,859 men and women from Albany, Framingham, Evans County, Honolulu, and San Francisco confirms that there is a strong inverse relationship between HDL cholesterol level and coronary heart disease.[2] In older patients (Framingham study) a low HDL cholesterol level was closely associated with coronary events, but there was no association of coronary heart disease with total cholesterol values.[1]

Recently a prospective angiographic study of lipid-lowering therapy showed that coronary obstruction was inversely related to average HDL concentration. No association between LDL cholesterol and coronary artery disease progression was seen.[5] A similar study by the National Heart, Lung, and Blood Institute using cholestyramine demonstrated that there was a dramatic negative association between coronary lesion progression and a 4% to 8% increase in HDL cholesterol.[23] It is of note that in our study gemfibrozil produced an 11% increase in HDL cholesterol.

When significant increases in the HDL/CHOL ratio occurred in patients undergoing treatment in the National Heart Lung and Blood Institute study, the progression of coronary artery disease was reduced by two-thirds in a period of seven years.[23] In our study, gemfibrozil produced increases in HDL/CHOL ratio in 80% of patients with an average increase from 0.15 to 0.18.

The importance of examining HDL cholesterol subfractions has been shown by Miller, who has demonstrated that the HDL_2 subfraction is epidemiologically and angiographically associated with coronary heart disease.[10] This may be related to the effect of lipoprotein lipase on VLDL which is transferred to HDL_3 and in turn converted to HDL_2.[24] In our study, gemfibrozil produced a significant increase in only the HDL_3 subfraction with a small but statistically insignificant increase occurring in the HDL_2 subfraction.

It is possible that having pharmacologic increases in HDL induced by gemfibrozil may not be the same as having genetically high HDL levels. Gemfibrozil apparently increases the synthesis of apolipoprotein A-1 and nascent HDL, which in turn makes more HDL molecules available for reverse cholesterol transport. A number of other agents, including diphenylhydantoin, nicotinic acid, terbutylene, estrogen, DDT, alcohol, and insulin, have all been shown to increase HDL cholesterol but are not known to reduce the incidence of coronary events.[16]

Nevertheless, because of its beneficial effects on HDL/CHOL ratio, gemfibrozil is an attractive drug for treating cardiac patients with abnormal serum lipids. As a drug that can reduce total cholesterol and additionally increase HDL cholesterol levels, gemfibrozil may be the preferred choice in the treatment of hyperlipidemia.

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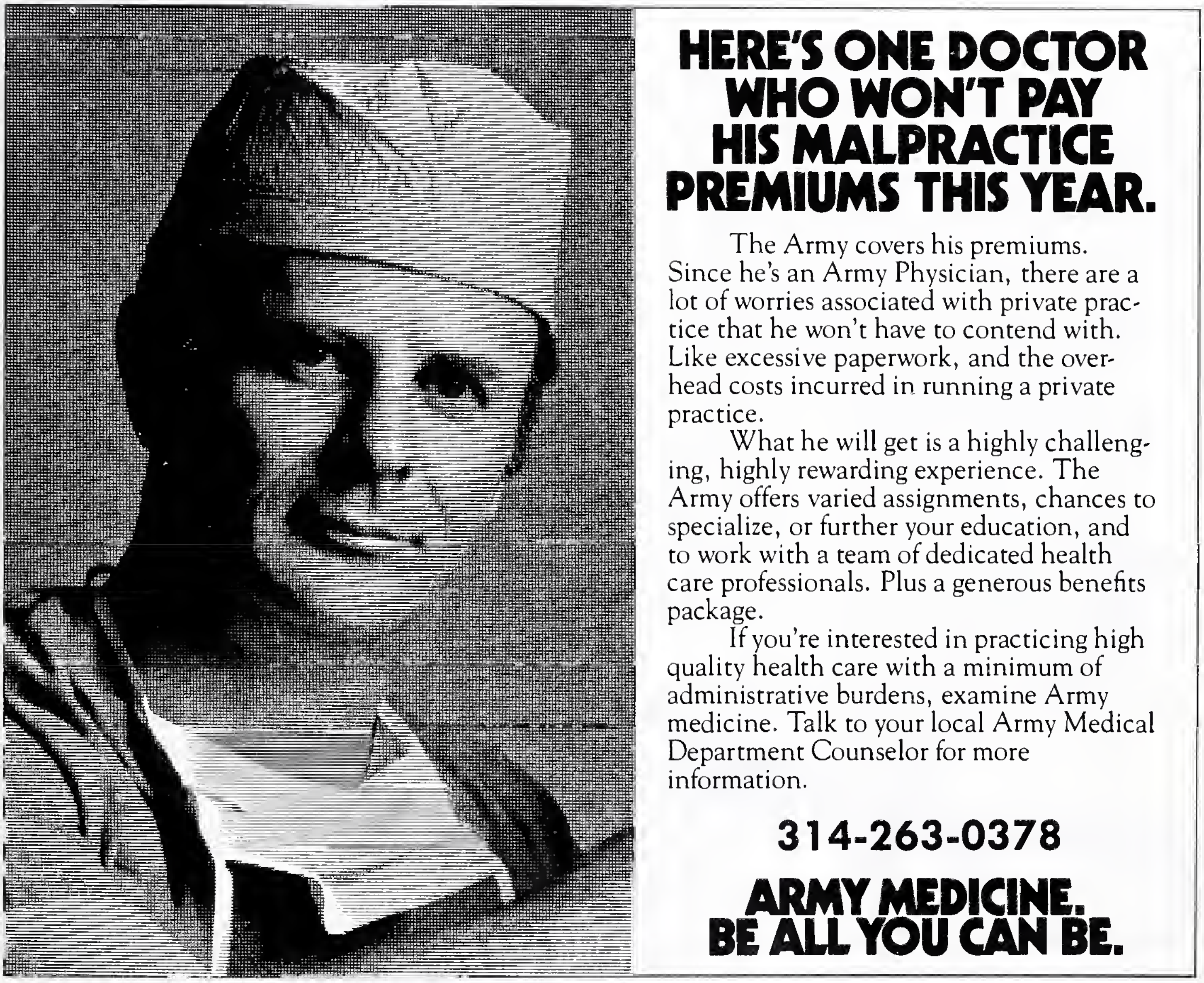

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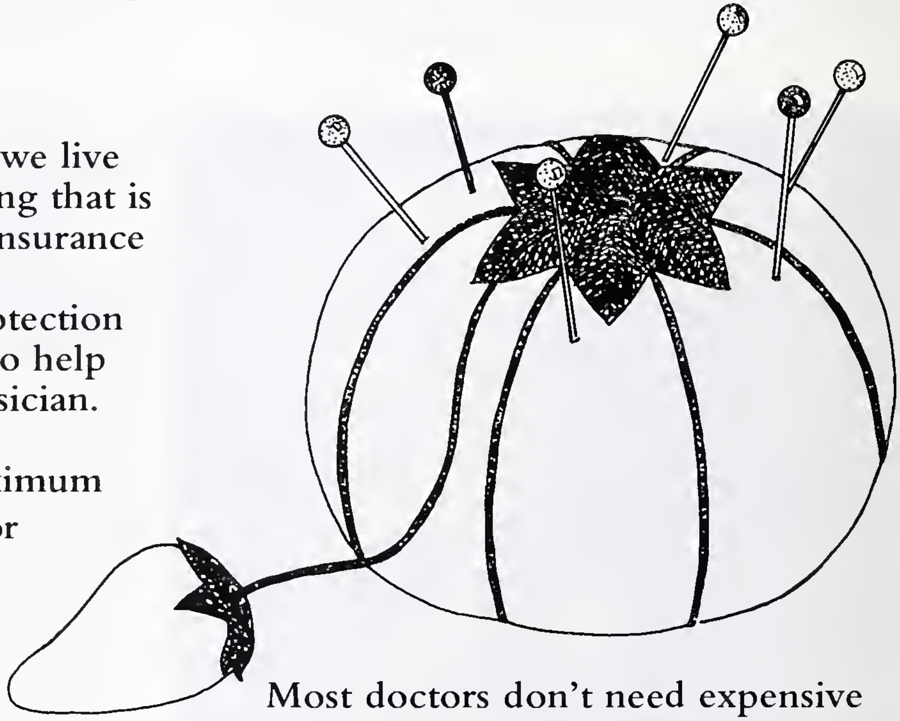

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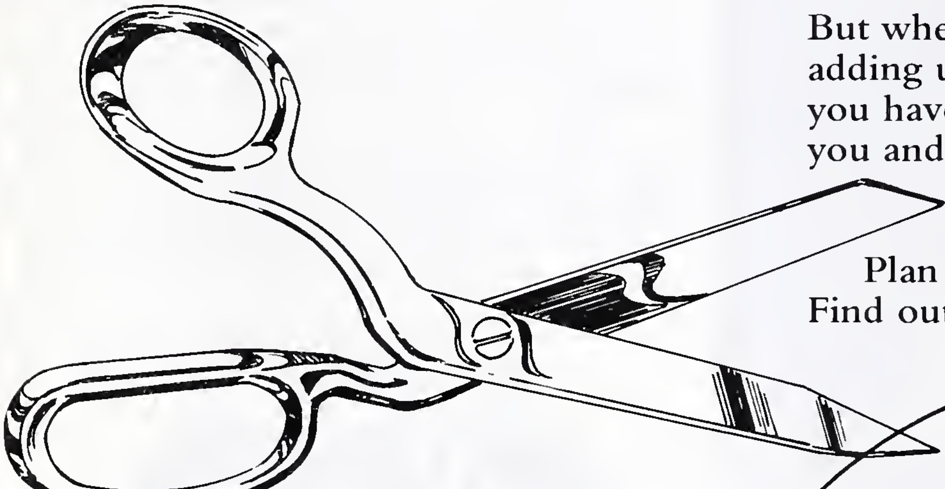

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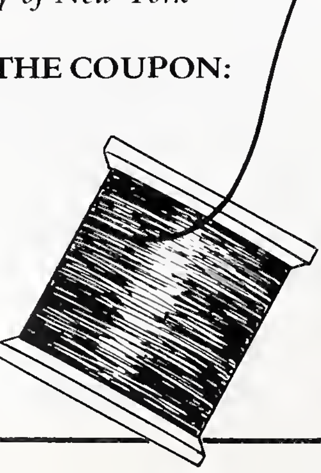

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New Members

- **Druery J. Dixon, M.D.,** 816 E. 2nd, Willow Springs 65793, has become a member of the South Central Counties Medical Society. Dr. Dixon received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1984. He completed his residency at the University of Tennessee, Knoxville, TN. He specializes in family practice.

- **Randall G. Dudik, M.D.,** 1301 South Belt, St. Joseph 64507, has become a member of the Buchanan County Medical Society. Dr. Dudik received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1981. He completed his residency at the University of Texas Health Science Center, San Antonio, TX. He specializes in general practice.

- **Gerald F. Dugan, M.D.,** 6650 Troost Ave., Suite 103, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Dugan received his preliminary education at Oklahoma State University and obtained his medical degree at the University of Oklahoma in 1982. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. He specializes in orthopaedic surgery.

- **Ryan K. Edwards, M.D.,** 1718 South Ingram, Sedalia 65301, has become a member of the Pettis County Medical Society. Dr. Edwards received his preliminary education at Union College and obtained his medical degree at Loma Linda University Medical School in 1981. He completed his residency at St. Luke's Hospital, Truman Medical Center, Kansas City, MO. He specializes in orthopaedic surgery.

- **Rebecca S. Hierholzer, M.D.,** 2800 Hospital Drive, North Kansas City Hospital, North Kansas City 64116, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hierholzer received her preliminary education at the University of Missouri-Kansas City and obtained her medical degree at UMKC in 1981. She completed her residency at Truman Medical Center, Kansas City, MO. She specializes in emergency medicine.

- **Jem J. Hoff, M.D.,** Dept. of PMR, University of Missouri, One Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Hoff received his preliminary education at the University of South Dakota and obtained his medical degree at the University of South Dakota School of Medicine in 1986. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. He specializes in physical medicine and rehabilitation.

- **Kevin F. Knop, M.D.,** 2902B McClelland Blvd., Joplin 64802, has become a member of the Jasper County Medical Society. Dr. Knop received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas in 1984. He completed his residency at the University of Kansas Medical Center, Kansas City, KS. He specializes in anesthesiology.

- **Richard H. Matthews, M.D.,** 1000 W. 10th St., Rolla 65401, has become a member of the Mid-Missouri County Medical Society. Dr. Matthews received his preliminary education at Kalamazoo College and obtained his medical degree at Ohio State University in 1983. He completed his residency at M.D. Anderson Hospital, Houston, TX. He specializes in radiation oncology.

- **William M. Platt, M.D.,** 501 Rusk, One Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Platt received his preliminary education at Wofford College and obtained his medical degree at the University of Tennessee Center for Health Sciences in 1986. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. He specializes in physical medicine and rehabilitation.

- **Thomas G. Prater, M.D.,** 1965 S. Fremont, Suite 2000, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Prater received his preliminary education at Southern Methodist University and obtained his medical degree at the Washington University School of Medicine in 1983. He completed his residency at Washington University/Barnes Hospital, St. Louis, MO. He specializes in ophthalmology.

- **Thomas M. Reardon, M.D.,** 2301 Holmes, Truman Medical Center, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Reardon received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1984. He is completing his residency at Truman Medical Center, Kansas City, MO. He specializes in general surgery.

- **Daniel A. Saviers, M.D.,** Rusk Rehabilitation Center, One Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Saviers received his preliminary education at Youngstown State University and obtained his medical degree at Northeastern Ohio Universities College of Medicine in 1986. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. He specializes in physical medicine and rehabilitation.

- **Roger P. Thomas, M.D.,** Rusk Rehabilitation Center, One Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Thomas received his preliminary education at Ohio State University and obtained his medical degree at Northeastern Ohio Universities College of Medicine in 1986. He is completing his residency at Rusk Rehabilitation Center, University of Missouri Hospital and Clinics, Columbia, MO. He specializes in physical medicine and rehabilitation.

- **Sherry A. Turcotte, D.O.,** 2710 N. Range Line, Joplin 64801, has become a member of the Jasper County Medical Society. Dr. Turcotte received her preliminary education at Pittsburg State University and obtained her osteopathic degree at the University of Health Sciences in 1985. She completed her internship at Oak Hill Hospital, Joplin, MO. She specializes in family practice.

- **Randy B. Weiss, D.O.,** 932 E. 34th Street, Joplin 64804, has become a member of the Jasper County Medical Society. Dr. Weiss received his preliminary education at the Inter-American University, Hato Rey, Puerto Rico and obtained his osteopathic degree at the Chicago College of Osteopathic Medicine in 1977. He completed his residency at the Chicago Osteopathic Hospital, Chicago, IL. He specializes in radiology.

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Medical School News

University of Missouri-Kansas City

- More than 250 people attended a Nov. 20 banquet to commemorate the twenty-fifth anniversary of the Truman Medical Center Corporation. Among those recognized were more than 40 individuals who have provided valuable contributions to Truman Medical Center-West and Truman Medical Center-East, as well as to its primary affiliate, UMKC School of Medicine.

  The health-care and educational goals of this corporation date back to 1962, when the city of Kansas City, Missouri, contracted the operation of General Hospital to a private board of directors. From this group's efforts sprang Truman Medical Center, a regional health-care center and teaching hospital, and UMKC School of Medicine. Proceeds from the event, held at the Allis Plaza Hotel, went to the Truman Medical Center Charitable Foundation.

- An active contingent of UMKC School of Medicine faculty and staff members recently attended the annual meeting of the Association of American Medical Colleges in Washington, D.C. Among their activities were poster sessions, invited discussions, and oral presentations. Invited participants in discussions sponsored by the Group on Medical Education included **Louise Arnold, Ph.D.,** who served as moderator and panelist for "Learning Styles and Learning Preferences in Medical Education," and **Marjorie Sirridge, M.D.,** who was a resource person for "Interdisciplinary Health Education." In addition, Dr. Arnold was organizer and moderator for "Toward a National Policy on Physician Supply: The Response of Combined-Degree Programs." **Jack L. Mulligan, M.D.,** and Dr. Arnold also made an invited presentation on "Contribution of Education to Cost-Effective Care of Health Maintenance Needs," "Low-Back Pain, Abdominal Pain, and System Hypertension," and Dr. Arnold made a presentation on "Studies of Physician Graduates for the Evaluation of Medical Education Programs; UMKC Perspective."

  Louise Arnold, Ph.D., professor and director of the Office of Medical Education and Research, was elected delegate-at-large to the AAMC's Group on Medical Education, Central Region, Steering Committee.

- Two Truman Medical Center department chairmen, **Thomas A. Nicholas, M.D.,** and **James J. Youngblood, M.D.,** recently received high honors for their efforts in medical education. Dr. Nicholas, professor and chairman of the Department of Community Medicine and Family Practice at TMC-East, received one of the highest awards bestowed by the American Academy of Family Physicians (AAFP). The AAFP presented the Thomas W. Johnson Award to Dr. Nicholas for outstanding contributions to Family Practice education. Dr. Nicholas' 37-year career has included private practice, teaching, and national Family Practice leadership.

  Dr. Youngblood, professor and chairman of TMC's Department of Obstetrics and Gynecology, was honored as an outstanding residency program director by District VII of the American College of Obstetricians and Gynecologists (ACOG). Dr. Youngblood was presented with the 1987 ACOG District VII Outstanding Residency program Director Award by the district's Junior Fellows. ACOG's District VII includes the states of Alabama, Arkansas, Kansas, Louisiana, Mississippi, Missouri, Oklahoma, and Texas, as well as Mexico and Panama.

- First-year medical student **Doug Tietjen,** one of 100 delegates to the National Youth Science Camp last summer, was honored by being asked to represent all the delegates by speaking before the camp's Board of Directors on Oct. 31. He was selected from a highly competitive pool: Two delegates for the three-week camp from each state are selected by the governor of each state. Mr. Tietjen, who is from Osage Beach, Mo., was selected to speak, based on the fact that he is a good representative of all the campers.

- Three students from UMKC School of Medicine, **Mark G. Griffin, Jeffrey D. Kerby,** and **Paul "Chip" Zachary, Jr.,** were selected as 1987 Outstanding Young Men of America (OYMA). Their biographies will appear in the annual awards publication, *Outstanding Young Men in America*. The OYMA program is designed to honor and encourage exceptional young men between the ages of 21 and 36 who have distinguished themselves in many fields of endeavor, such as service to community, professional leadership, academic achievement, business advancement, cultural accomplishments, and civic and political participation.

- A senior UMKC medical student recently had a paper accepted for oral presentation in an original contribution session at the American College of Cardiology National meeting, to be held in Atlanta on March 31, 1988. **David Park** completed a special medical-student research fellowship at the Mid-America Heart Institute under the direction of **Ben D. McCallister, M.D.** His project was titled, "Major Complications Following Coronary Angioplasty, An Analysis of 5,413 Cases."

- Two third-year medical students, **Alex Park** and **Mark Stanfield** recently were selected to receive $500 scholarships from the Southern Medical Association. This award is provided to students based upon academic merit and financial need.

- Eighteen students from UMKC School of Medicine were selected as national outstanding leaders, and will be listed in the 1988 edition of *Who's Who Among Students in American Universities and Colleges*. Students are selected based on their academic achievement, service to the community, leadership in extracurricular activities, and potential for continued success. The 18 UMKC medical students are: **Patricia L. Allen, Jerome G. Castro, Melinda A. Crockett, Laura L. Dill, Jose M. Dominguez, Scot W. Ebbinghaus, Linda A. Estevez, Carissa M. Heim, Jacqueline M. Lai, Lisa A. Lillicrap, Gary W. McEwen, Clark R. McKenzie, Shawn C. Merys, Linda E. Mueller, Nasreen A. Syed, Raj P. TerKonda, Joelle Waldman,** and **William T. Wester.**

St. Louis University

- The first comprehensive epilepsy treatment center in Missouri opened November 16 at St. Louis University Medical Center. The Greater Midwest Epilepsy Treatment Center has been formed in affiliation with the neurology department at St. Louis University and Bethesda General Hospital. **William E. Rosenfeld, M.D.,** assistant professor of neurology, will head the center.

The center's main goal will be to help those in the Midwest with epilepsy achieve maximum control over their seizures. The center will provide both inpatient and outpatient services rendered by a team that includes neurologists, neurosurgeons, neuropsychologists, social workers and nurses.

■ Lawyers, physicians, ethicists and others gathered at St. Louis University Medical Center on December 3 and 4 for a two-day conference to explore the ethical problems presented by the AIDS crisis. "AIDS: The Ethical Dilemmas" was sponsored by the Center for Health Care Ethics at the medical center and the Catholic Archdiocesan Task Force on AIDS.

The keynote address was delivered by **Mervyn F. Silverman, M.D.,** president of the American Foundation for AIDS Research. Dr. Silverman, a specialist in preventive medicine, is also director of the AIDS Health Services Program of the Robert Wood Johnson Foundation. He gave a talk titled "AIDS and Access to Health Care."

Other topics addressed in the two-day conference included AIDS and the law, testing, the role of schools in education and prevention, and the challenges the crisis presents to hospital administrators.

The talks presented in "AIDS: The Ethical Dilemmas" were the Third Annual Drummond Lectures in Medical Ethics. The lectures honor the **Rev. Edward J. Drummond,** who was the first vice president of the medical center from 1962 to 1973. In 1973 he became executive vice president of St. Louis University and served as interim president in 1978-79. Father Drummond retired in 1979, but continues to serve as special assistant to the vice president of the medical center.

■ St. Louis University School of Medicine has been awarded a $30,000 Institutional Research Grant from the American Cancer Society. The grant will be used to initiate cancer research.

Awards from the grant will be available to young faculty members at the medical school. The faculty members are encouraged to initiate projects that will lead to larger research efforts directed toward understanding the growth of cancer and finding a cure for the disease.

The individual awards will be made through the St. Louis University Medical Center Cancer Research Committee. The committee is chaired by **J. Wendell Davis, Ph.D.,** professor of biochemistry.

■ **Arthur E. Baue, M.D.,** vice president for St. Louis University Medical Center, gave a presentation at the Second International Steglitz Symposium in West Berlin, Germany, October 20-30. His presentation was titled "Sepsis: An Interdisciplinary Challenge, Cellular and Subcellular Functions of Vital Organs in Sepsis, Multi-Organ Failure."

■ **Max Pepper, M.D., M.P.H.,** professor and chairman of the department of community medicine at St. Louis University School of Medicine, was the speaker at the November meeting of the St. Louis chapter of Physicians for Social Responsibility. His presentation was a report on the VII Congress of the International Physicians for the Prevention of Nuclear War and on the First International Conference of Health Workers on Social Well Being, Health and Peace. Both these conferences were held in June in Moscow, U.S.S.R.

■ **John B. Selhorst, M.D.,** professor and chairman of the department of neurology at St. Louis University School of Medicine, has been named to the board of trustees of the St. Louis Gateway Chapter of the National Multiple Sclerosis Society.

■ **Morton M. Weber, Sc.D.,** professor and chairman emeritus of the department of microbiology at St. Louis University School of Medicine, presented a paper at a symposium at Oxford University. Dr. Weber was one of 17 invited speakers in the symposium. His paper was titled "A Study of Bioenergetics Leading to an Understanding of the Possible Mode of Action of the Antitubercular Drug, Isoniazid."

■ Cancer treatment at St. Louis University Medical Center recently expanded in scope as bone marrow transplantation became an active program here. The first such procedure was performed September 11 at The University Hospital by **William A. Knight III, M.D.,** professor of internal medicine and director, division of oncology.

The patient, a 35-year-old St. Louis man, has been suffering from lymphoma and underwent bone marrow transplantation after all conventional treatment had failed to arrest the disease, according to Dr. Knight. The patient was released from the hospital on October 19 with fully recovered marrow. Dr. Knight estimates that the patient has a 25%-30% chance for cure.

Dr. Knight anticipates that bone marrow transplantation will become a growing program now that it is underway. The procedure is currently most successful in the treatment of lymphoma. Dr. Knight is investigating the efficiency of this treatment for breast cancer and colon cancer; his research is funded by the Veterans Administration.

The University of Missouri-Columbia

■ **Hugh E. Stephenson, Jr., M.D.,** has been appointed interim dean of the University of Missouri-Columbia School of Medicine effective Jan. 1, 1988. Dr. Stephenson is currently the John Growdon Distinguished Professor of Surgery at the School of Medicine and serves as the chief of staff at the University Hospital and Clinics. He has served on the School of Medicine faculty since 1953.

A native of Columbia, he received his bachelor of science degree from the University of Missouri-Columbia and graduated from the University's two-year School of Medicine in 1943. He completed his M.D. degree in 1945 at Washington University School of Medicine in St. Louis.

For the last 10 years, Dr. Stephenson has been chief of general surgery. His work has focused on cardiac arrest and resuscitation. Last year, Dr. Stephenson was invited to be a program moderator and speaker at a meeting of specialists worldwide celebrating the 50th anniversary of the Institute of Resuscitation in Moscow. He is also the author of a clinical reference book titled "Cardiac Arrest and Resuscitation," and has served as a consultant and committee member to numerous state and national professional boards. **Dean Michael Whitcomb, M.D.,** announced his resignation last fall effective January 1, 1988 to accept the position of Dean of the School of Medicine at the University of Washington.

■ **Karl Nolph, M.D.,** professor and director of nephrology, has been named chairman of the dean search committee for the School of Medicine. Other members of the committee are **Judson Sheridan, Ph.D.,** vice provost for research; **William Allen, M.D.**, professor of surgery; **Gordon Brown, Ph.D.**, professor and director of health services management; **David Dueker, M.D.**, associate professor of ophthalmology; **H. D. Kim, Ph.D.**, professor and chairman of pharmacology; **Edith Mitchell, M.D.**, assistant professor of medicine and assistant to the dean of minority affairs; **Ann Rosenow, Ph.D.**, professor and associate dean for research of the School of Nursing; and **Christy Richardson**, second-year medical student. A School of Medicine alumnus also will be named to the committee.

■ **Douglas Griggs, M.D.**, professor of physiology, has just been awarded a prestigious MERIT grant from the National Institutes of Health for his study of "Coronary Collateral Function in the Conscious Pony." The NIH recently designed the Method to Extend Research in Time (MERIT) awards to provide extended support to researchers who have made "distinctly superior" scientific contributions. These awards are based on special importance, promise and merit of the research, as well as the investigator's leadership and success record. The five-year, $1.7 million grant also provides an opportunity for a grant renewal of up to five more years without going through the usual extensive grant renewal process. This is the second such grant awarded to a researcher in the Department of physiology.

■ **Boyd O'Dell, Ph.D.**, professor emeritus of biochemistry, has been appointed to two committees of the National Research Council. He will now serve on both the U.S. National Committee for the International Union of Nutritional Sciences and the Committee on Animal Nutrition's Subcommittee on Bioavailability of Nutrients.

■ **Michael Prewitt, Ph.D.**, assistant professor of health related professions and director of respiratory therapy, recently conducted Missouri's portion of a national survey about banning smoking on commercial airline flights. Almost 65% of all airline passengers favor a smoking ban on airplanes according to the survey by the American Association for Respiratory Care (AARC). Dr. Prewitt reported that many smokers as well as most non-smokers indicated they think smoking on airplanes infringes upon the rights of others. The AARC is trying to focus attention on this issue because of the health risks of smoky air recirculated by airline ventilation systems. Affiliate chapters of the AARC in 39 states, such as the one at the University of Missouri-Columbia, participated in the study by surveying a total of more than 33 thousand airline patrons at 89 airports.

■ **Zbylut Twardowski, M.D.**, professor of nephrology, has been awarded a U.S. patent for the Missouri Catheter which he developed to help eliminate frequent problems with peritoneal dialysis (PD). The new catheter, already being used in North America, South America, Europe, Asia and Japan, is improving PD for patients around the world by decreasing obstruction and infections. While a large percentage of catheters previously used in PD resulted in obstruction, leakage or chronic infections, the Missouri Catheter is designed to avoid such problems. The key to the catheter's design is that it is permanently bent rather than a straight tube bent when used. The difference has already proved significant for many patients and Dr. Twardowski hopes it will make dialysis easier for those patients who want the convenience of PD.

Washington University

■ Researchers at Washington University School of Medicine in St. Louis are seeking volunteers for a new diabetes study.

The study involves testing a new oral medication to see how effectively it can lower sugar and lipid levels in the blood. Needed in the study are persons with mild adult-onset diabetes who are 35-65 years old, slightly overweight and in good health. Participants will be hospitalized for 19 days for blood tests and observation. Volunteers who are selected to participate will be paid $1,000.

For more information, call the Division of Metabolism at Washington University School of Medicine at 314/362-6914.

■ Diabetes researcher **M. Alan Permutt, M.D.**, professor of medicine at Washington University School of Medicine in St. Louis, has been honored for his scientific contributions by receiving MERIT status for his latest grant.

The grant for $995,361 is from the National Institute of Diabetes and Digestive and Kidney Diseases, part of the National Institutes of Health (NIH).

Permutt's research is directed toward finding genetic markers to predict who is at high risk of developing diabetes.

■ A noted specialist on disorders of blood clotting delivered the 15th annual Carl V. Moore Memorial Lecture November 13 at Washington University School of Medicine.

Desire J. Collen, M.D., Ph.D., is professor of medicine at the Center for Thrombosis and Vascular Research in Leuven, Belgium. His lecture was titled "New Approaches to Thrombolytic Therapy."

The Moore Lecture is sponsored each year by the Department of Medicine at Washington University in honor of the late **Carl V. Moore, M.D.** Moore was Busch Professor and head of the Department of Medicine, first vice chancellor for medical affairs at the School of Medicine, and president of the Washington University Medical Center. He died in 1972.

Collen's research focuses on the body's mechanisms for hemostasis — the arrest of bleeding or circulation — and thrombosis, the formation of blood clots. He is perhaps best known for his studies of new thrombolytic and antithrombotic agents. He discovered the unique properties of t-PA — tissue plasminogen activator — and was the first to use the drug in man.

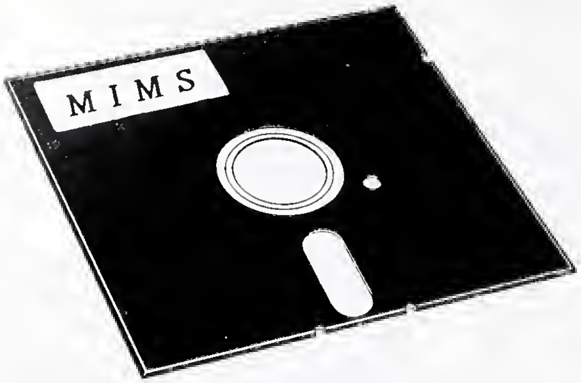
■ **David K. Parkinson, M.D.**, professor of community and preventive medicine at the State University of New York, Stony Brook, gave the fifth Richard A. and Betty Sutter Visiting Professorship in Occupational and Industrial Medicine on November 24. His lecture was titled, "Integration of Occupational Medicine and Psychiatry — the Case of Solvent Exposure."

Parkinson is an authority on psychological and physical stresses in the workplace that might threaten mental health. He is also involved in the development of research strategies for assessing the psychiatric effects of exposure to various hazards.

Parkinson headed the occupational health branch of the California Department of Health (Cal/OSHA) from 1975-77. He serves as a consultant to many corporations and organizations, including the United Steelworkers of America, the International Brotherhood of Electrical Workers, the Institute for Labor Studies at West Virginia University, and the General Electric Co.

St. Louis physician **Richard A. Sutter, M.D.**, and his wife, **Betty**, established the visiting professorship in 1985 to expand the understanding and practice of occupational medicine. Occupational medicine deals with conditions in the workplace and their effects on employee health, preventive med-

(continued on page 40)



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BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED
CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712.

Issued 3/84

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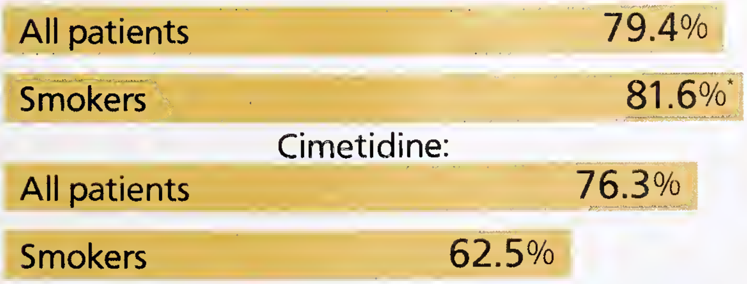

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icine for workers, safety factors, and emergency and definitive surgical care and rehabilitation for the industrially ill and injured.

■ Washington University School of Medicine is seeking people with insulin-dependent diabetes to participate in one of the largest and most important studies of the disease ever performed.

Volunteers are needed for the Diabetes Control and Complications Trial (DCCT), a seven-year study that will include 1,400 participants. Washington University is one of 27 medical centers across North America helping to conduct the research. The DCCT is funded by the National Institutes of Health.

The DCCT is designed to answer one of the most important remaining questions about diabetes: how effective are some of the newer forms of diabetes therapy at preventing, delaying or reversing the presence of diabetic complications? These complications may affect the eyes, kidneys, nerves, heart and blood vessels.

Even in people who control their diabetes, complications can cause serious health problems,'' says **Julio Santiago, M.D.**, one of the local study directors. "The relationship between blood sugar control and diabetic complications is an extremely important issue. The outcome of the DCCT will have a major impact on the treatment of diabetes in the future."

Santiago — and study co-director **Neil White, M.D.**, — are looking for individuals with type I, or insulin-dependent diabetes. Participants must be between the ages of 13 and 39, and must have had type I diabetes for five years or less. They cannot be taking more than two insulin injections per day, be using an insulin pump, or have any severe complications from diabetes.

Volunteers in the study will receive free medical care from diabetes specialists at Washington University School of Medicine for the next seven years. This will include free diabetes supplies and free testing for diabetes complications. To get further information, call 314/454-6025.

■ Washington University has received a $1.4 million grant from the National Library of Medicine to establish a training program in medical informatics. Medical informatics is the study of the collection, organization, and communication of computerized biomedical information for research and patient care.

The Medical Informatics Training Program, one of only seven in the U.S., is centered in the Washington University Institute for Biomedical Computing, a joint department of the School of Medicine and the School of Engineering. It is an interdisciplinary effort governed by members of the departments of computer science, electrical engineering, internal medicine, genetics and engineering.

For more information on the program, contact co-directors Charles E. Molnar, Sc.D. or Mark Frisse, M.D. at the Institute for Biomedical Computing. Telephone Frisse at 314/362-8071 or Molnar at 314/889-4683.

■ Beginning in July, Washington University School of Medicine will offer an individualized post-graduate training program for M.D./Ph.D.s.

The Post-Graduate Medical Scientist Training Program (PGMSTP) is designed to guide graduates through their clinical training and give them continued access to the latest scientific developments in the physical and biological sciences. A two-year, fully funded post-graduate research experience will be available to all candidates so that they may acquire skills in their areas of scientific interest.

The PGMSTP is a continuation of the School of Medicine's Medical Scientist Training Program, established in 1969 and currently the largest such program in the country. Close interaction between members of both programs will be encouraged by a yearly symposium and a series of lectures and retreats.

Requests for applications should be made to the program's director, Jeffrey I. Gordon, at Campus Box 8001, Washington University, 660 South Euclid Ave., St. Louis, MO 63110, 314/362-7190.

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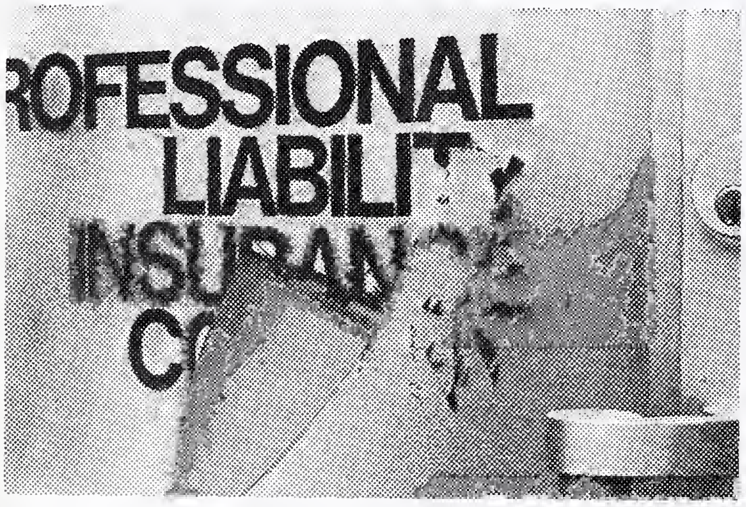

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Physician's Recognition Awards

Forty-nine MSMA members qualified for the MSMA-AMA Physician's Recognition Award during October 1987.

The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Audrain

H. Peter Ekern, *Mexico*

Boone

Thomas E. Edes, *Columbia*
Thomas R. Highland, *Columbia*
Leo R. Landhuis, *Columbia*
Stephen L. O'Keefe, *Columbia*
Raymond W. Schondelmeyer, *Columbia*
Robert P. Stoy, *Columbia*

Buchanan

Michael D. DePriest, *St. Joseph*

Butler-Wayne-Ripley-Carter

Louis A. Benoist, *Poplar Bluff*
Ramasamy Seralathan, *Poplar Bluff*
Devendra K. Varma, *Poplar Bluff*

Cape Girardeau

John S. Whitten, *Cape Girardeau*

Clay-Platte

John C. Hagan, *North Kansas City*
Bryan L. Sitzmann, *Kansas City*
James L. Stewart, *North Kansas City*

Dunklin

Nicholas F. Robinson, *Kennett*

Franklin-Gasconade-Warren

Howard N. Short, *Washington*

Greene

Donald H. Beisner, *Springfield*
William F. Cunningham, *Springfield*
John F. Ferguson, *Springfield*
Frank C. Giddings, *Springfield*
Doyle O. Kinder, *Springfield*

Greene (Cont.)

John W. Meyer, *Springfield*
Eugene R. Worth, *Springfield*

Jasper

Wendell D. Rankin, *Joplin*

Metro Med-Greater Kansas City

Romeo F. Arribas, *Blue Springs*
Michael S. Fedotin, *Kansas City*
James W. Fowler, *Kansas City*
John W. Hardy, *Kansas City*
Lowry Jones, *Kansas City*
Michael A. Montgomery, *Kansas City*
William F. Sanders, *Kansas City*
Gerald F. Tuohy, *Kansas City*
Daniel S. Whitman, *Kansas City*

Perry-Ste. Genevieve

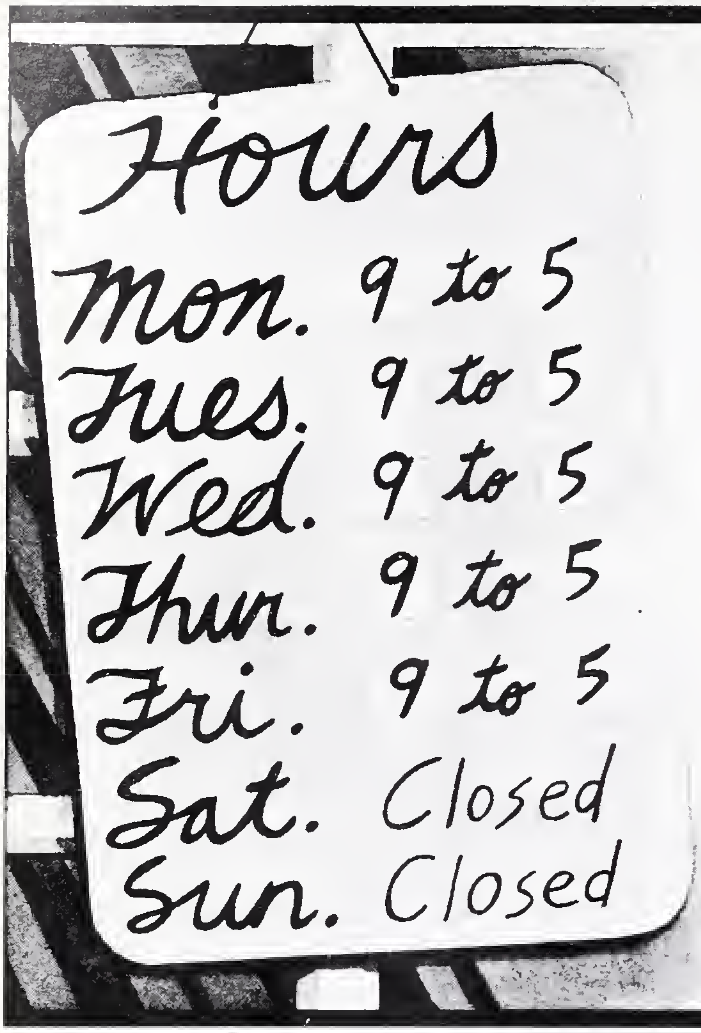
Tim E. Eckstein, *Ste. Genevieve*

St. Charles-Lincoln

Thomas A. Schneider, *St. Charles*

St. Louis Metropolitan

Michael J. Chehval, *St. Louis*
Fernando DelValle, *St. Louis*
Jhonson E. Flores, *St. Louis*
John A. Gragnani, *Ellisville*
Robert C. Loynd, *Clayton*
Lawrence W. O'Neal, *St. Louis*
Stephen M. Palmer, *St. Louis*
Philip L. Robbins, *St. Louis*
H. Bryan Rogers, *St. Louis*
Nitai C. Saha, *St. Louis*
William F. Sasser, *St. Louis*
Henry G. Stratmann, *St. Louis*
Newton B. White, *St. Louis*



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Before prescribing, please consult complete product information, a summary of which follows:
CONTRAINDICATIONS: Hypersensitivity to trimethoprim or sulfonamides; documented megaloblastic anemia due to folate deficiency; pregnancy at term and during the nursing period; infants less than two months of age.
WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.
BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder Perform complete blood counts frequently
BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A ß-hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.
PRECAUTIONS: *General:* Give with caution to patients with impaired renal or hepatic function, possible folate deficiency (*e.g.*, elderly, chronic alcoholics, patients on anticonvulsants, with malabsorption syndrome, or in malnutrition states) and severe allergies or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur, frequently dose-related
Use in the Elderly May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, *e.g.*, impaired kidney and/or liver function, concomitant use of other drugs Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) or a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported. Make appropriate dosage adjustments for patients with impaired kidney function (see DOSAGE AND ADMINISTRATION)
Use in the Treatment of Pneumocystis Carinii *Pneumonitis in Patients with Acquired Immunodeficiency Syndrome (AIDS):* Because of unique immune dysfunction, AIDS patients may not tolerate or respond to Bactrim in same manner as non-AIDS patients. Incidence of side effects, particularly rash, fever, leukopenia, with Bactrim in AIDS patients treated for *Pneumocystis carinii* pneumonitis reported to be greatly increased compared with incidence normally associated with Bactrim in non-AIDS patients.
Information for Patients: Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.
Laboratory Tests: Perform complete blood counts frequently; if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.
Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time Bactrim may inhibit the hepatic metabolism of phenytoin. Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27% When giving these drugs concurrently, be alert for possible excessive phenytoin effect Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations
Drug/Laboratory Test Interactions: Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein. No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffe alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.
Carcinogenesis, Mutagenesis, Impairment of Fertility: Carcinogenesis: Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim *Mutagenesis:* Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination; concentrations used exceeded blood levels of these compounds following therapy with Bactrim Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities *Impairment of Fertility* No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.
Pregnancy: Teratogenic Effects: Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folic acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects: See CONTRAINDICATIONS section.
Nursing Mothers: See CONTRAINDICATIONS section.
Pediatric Use: Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).
ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION).**
Hematologic: Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. *Allergic Reactions:* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarteritis nodosa and systemic lupus erythematosus have been reported *Gastrointestinal:* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. *Genitourinary:* Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. *Neurologic.* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. *Psychiatric:* Hallucinations, depression, apathy, nervousness. *Endocrine:* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. *Musculoskeletal.* Arthralgia, myalgia. *Miscellaneous:* Weakness, fatigue, insomnia.
DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.
URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN: *Usual adult dosage* for urinary tract infections is one DS tablet, two tablets or four teaspoonfuls (20 ml) *b.i.d.* for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. *Recommended dosage for children* with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days Use identical daily dosage for 5 days for shigellosis. *Renal Impaired:* Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended.
ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS: Usual adult dosage is one DS tablet, two tablets or four teasp (20 ml) *b.i.d.* for 14 days.
PNEUMOCYSTIS CARINII PNEUMONITIS: Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.
HOW SUPPLIED: *DS (double strength) Tablets* (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20 *Tablets* (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40 *Pediatric Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). *Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint).
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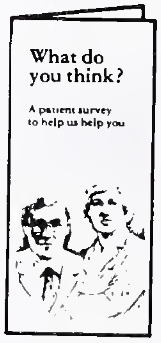
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In Memoriam

■ **Marvin F. Hall, M.D.,** died September 28, 1987 at the age of 79. Dr. Hall, a radiologist, established his practice in Joplin in 1943 and became a radiologist for St. John's Regional Medical Center. From 1951-1953, he served in the U.S. Air Force as a base hospital radiologist with the rank of major. He returned to Joplin, where he practiced until his retirement in 1974. He obtained his medical degree at the University of Iowa in 1937. Dr. Hall was a member of the Jasper County Medical Society.

■ **Harvey R. Michael, M.D.,** died October 30, 1987 at the age of 54. Dr. Michael, an orthopedic surgeon, was the team physician for Southwest Missouri State University Bears athletic teams for the past 18 years. He was inducted into the Missouri Sports Medicine Hall of Fame in 1986. He obtained his medical degree at the Oklahoma School of Medicine in Oklahoma City in 1962. Dr. Michael was a member of the Greene County Medical Society.

■ **Robert H. Michaels, M.D.,** died October 30, 1987 at the age of 43. Dr. Michaels, an ophthalmologist, practiced medicine in Springfield, MO. He obtained his medical degree at Indiana University School of Medicine in 1970. He was a member of the Greene County Medical Society.

■ **William P. Dennis, M.D.,** died May 17, 1987 at the age of 66. Dr. Dennis, a general practitioner, practiced medicine for 30 years, the last 16 being spent in Desloge. He obtained his medical degree at the University of Missouri School of Medicine in 1957. Dr. Dennis was a member of the Mineral Area County Medical Society.

■ **Donald P. Peterson, M.D.,** died November 6, 1987 at the age of 76. Dr. Peterson, a psychiatrist, was a former superintendent of Fulton State Hospital, serving from 1962-1976. He was a career officer in the U.S. Army Medical Corps, retiring as a colonel in 1956. He obtained his medical degree at the University of Minnesota School of Medicine in 1935. Dr. Peterson was a member of the Callaway County Medical Society.

■ **William T. K. Bryan, M.D.,** died October 10, 1987 at the age of 78. Dr. Bryan, an otolaryngologist, served on the staff of Barnes, Deaconess and St. Luke's hospitals for more than 40 years. He was associate professor emeritus of clinical otolaryngology at the Washington University School of Medicine and also maintained a research laboratory there with his wife. He graduated from Washington University in 1929 and obtained his medical degree at the Washington University School of Medicine in 1933. Dr. Bryan was a member of the St. Louis Metropolitan Medical Society.

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†See Warnings and Precautions.

Please see brief summary of prescribing information on the next page.

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diltiazem HCl/Marion

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☐ 60 mg ☐ 90 mg
☐ 120 mg

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Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg, 60 mg, 90 mg, and 120 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%).

Cardiovascular:	Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.
Nervous System:	Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.
Gastrointestinal:	Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.
Dermatologic:	Petechiae, pruritus, photosensitivity, urticaria.
Other:	Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 9/86

See complete Professional Use Information before prescribing.

References: 1. Schroeder JS: Mod Med 1982;50(Sept):94-116. **2.** Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39. **3.** O'Rourke RA: Am J Cardiol 1985;56:34H-40H. **4.** McCall D, Walsh RA, Frohlich ED, et al: Curr Probl Cardiol 1985;10(8):6-80. **5.** Frishman WH, Charlap S, Goldberger J, et al: Am J Cardiol 1985;56:41H-46H. **6.** Shapiro W: Consultant 1984;24(Dec):150-159. **7.** O'Hara MJ, Khurmi NS, Bowles MJ, et al: Am J Cardiol 1984;54:477-481. **8.** Strauss WE, McIntyre KM, Parisi AF, et al: Am J Cardiol 1982;49:560-566. **9.** Feldman RL, Pepine CJ, Whittle J, et al: Am J Cardiol 1982;49:554-559.

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January 1988

11 **"Radiology Conference"** — Location: St. Louis University, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

February

5-6 **"Midwinter Laser Course and Fluorescein Angiography Workshop"** — Location: Omni International Hotel at Union Station, St. Louis, MO. Contact: Jeanne B. Toma, 4949 Barnes Hospital Plaza, Suite 17413, St. Louis, MO 63110. 314/367-1181.

8 **"Acute Respiratory Disease in Children"** — Location: Mallinckrodt Institute of Radiology, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

10-12 **"8th National Conference on CAPD"** — Location: Westin Crown Center Hotel, Kansas City, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

12-14 **Organizational Systems** — Location: Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

20-21 **Family Practice Update** — Location: Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

20-22 **"Advanced Cardiac Life Support Provider Course"** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, CME Office, 1402 S. Grand Ave., St. Louis, MO 63104. 314/577-8167.

22-26 **Physician in Management** — Location: The Royal Plaza at Disney World, Orlando, FL. Contact: Sherry Mason, The American Academy of Medical Directors, 4830 W. Kennedy Blvd., Suite 648, Tampa, FL 33609-2517 813/287-2000.

March

14 **"2nd Annual Daniel R. Biello Memorial Lecture: 'Cardiovascular Nuclear Medicine' "** — Location: Mallinckrodt Institute of Radiology, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

24-26 **Midwest Regional Oncology Conference III** — Location: Hyatt Regency Crown Center, Kansas City. Contact: Beth Paul, Conference Planner, Center for Continuing Education, St. Luke's Hospital of Kansas City, Wornall Road at 44th, Kansas City, MO 64111. 816/932-2301.

April

11 **"Leroy Sante Lecture"** — Location: St. Louis University, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

14-15 **Respiratory Critical Care** — Location: Holiday Inn Executive Center, Columbia, MO. contact: Barry Kling, University of Missouri-Columbia, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

15 **Lymphoma Update 1988: New Diagnostic and Treatment Strategies** — Location: Jewish Hospital at Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

15-16 **Frontiers in Endoscopy** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

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Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

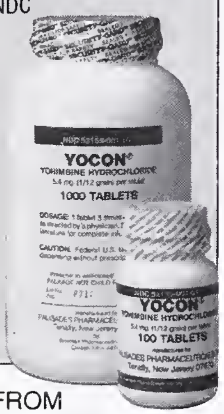
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



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20-21 **Advanced Contact Lens Seminar** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

28-29 **15th Annual Symposium on Obstetrics and Gynecology** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

29-30 **"Eating Disorders"** — Location: Hyatt Regency, Kansas City, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

May

9 **"Direct Digital Radiography"** — Location: Mallinckrodt Institute of Radiology, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

13-15 **"Emergency Room Legal Environment: Medicine's Response"** — Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, St. Louis University School of Medicine, CME Office, 1402 S. Grand, St. Louis, MO 63104.

19-21 **Progress in Clinical Pediatrics IV: Advances in Hematology and Oncology and Transplantation in Children: The State of the Art** — Location: St. Louis Children's Hospital at Washington University Medical Center, St. Louis, MO. Contact: Sharon Thiemann, CME Services, Children's Hospital, 400 South Kingshighway, St. Louis, MO 63110 314/454-2231.

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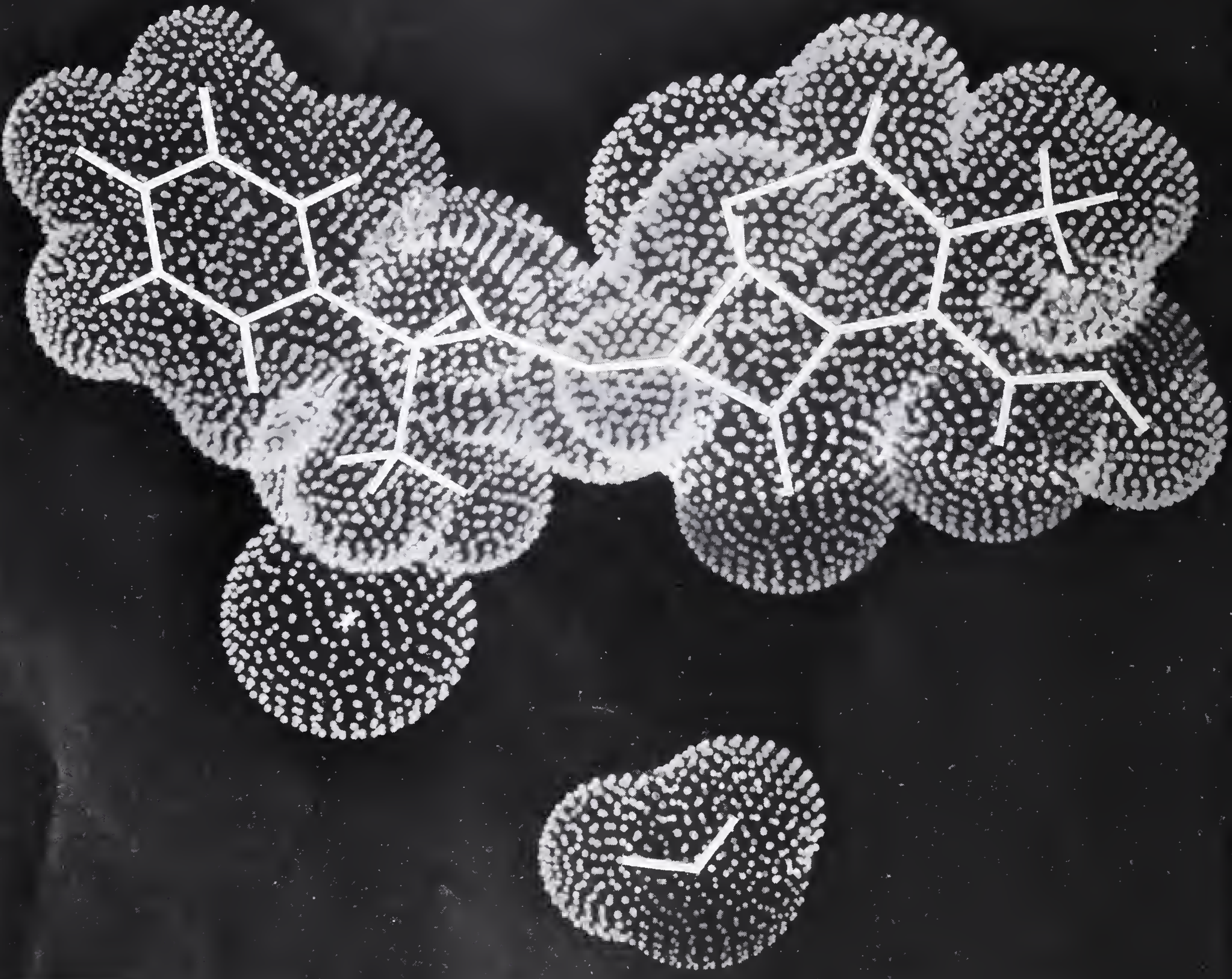

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nicillin is the drug of choice in the treatment and prevention streptococcal infections, including the prophylaxis rheumatic fever.

KEFTAB™
(cephalexin hydrochloride monohydrate)

Summary: Consult the package literature for prescribing information.

Indications and Usage:

Respiratory tract infections caused by susceptible strains of *Streptococcus pneumoniae* and group A β-hemolytic streptococci.

Skin and skin structure infections caused by susceptible strains of *Staphylococcus aureus* and/or β-hemolytic streptococci.

Bone infections caused by susceptible strains of *S aureus* and/or *Proteus mirabilis.*

Genitourinary tract infections, including acute prostatitis, caused by susceptible strains of *Escherichia coli, P mirabilis,* and *Klebsiella* sp.

Contraindication: Known allergy to cephalosporins.

Warnings: KEFTAB SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Keftab in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Keftab should be administered cautiously in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy and lactation. Cephalexin is excreted in mother's milk. Exercise caution in prescribing Keftab for these patients.
- Safety and effectiveness in children have not been established.

Adverse Reactions:

- *Gastrointestinal,* including diarrhea and, rarely, nausea and vomiting. Transient hepatitis and cholestatic jaundice have been reported rarely.
- *Hypersensitivity* in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson syndrome, or toxic epidermal necrolysis.
- *Anaphylaxis* has been reported.
- *Other reactions* have included genital/anal pruritus, genital moniliasis, vaginitis/vaginal discharge, dizziness, fatigue, headache, eosinophilia, neutropenia, and thrombocytopenia; reversible interstitial nephritis has been reported rarely.
- Cephalosporins have been implicated in triggering seizures, particularly in patients with renal impairment.
- *Abnormalities in laboratory test results* included slight elevations in aspartate aminotransferase (AST, SGOT) and alanine aminotransferase (ALT, SGPT). False-positive reactions for glucose in the urine may occur with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

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ue to susceptible strains of *Staphylococcus aureus* and/or β-hemolytic streptococci.
ue to susceptible strains of *Escherichia coli, Proteus mirabilis,* and *Klebsiella* sp.
ue to susceptible strains of group A β-hemolytic streptococci.

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References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

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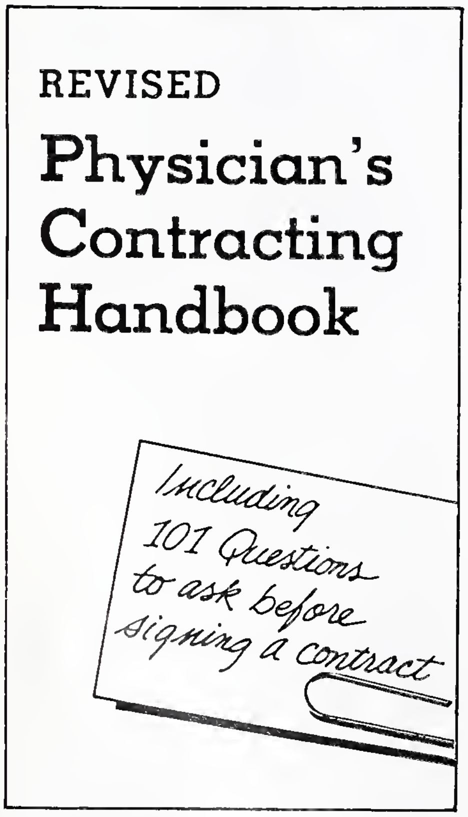

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References: 1. Feighner JP, *et al: Psychopharmacology 61* 217-225, Mar 22, 1979 **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses Myocardial infarction and stroke reported with use of this class of drugs) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving)

> ***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide)
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment Amitriptyline component may block action of guanethidine or similar antihypertensives When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive Discontinue several days before surgery Limit concomitant administration of ECT to essential treatment See Warnings for precautions about pregnancy Limbitrol should not be taken during the nursing period Not recommended in children under 12 In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects
Adverse Reactions: Most frequently reported are those associated with either component alone drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs
Cardiovascular Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke
Psychiatric. Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido
Neurologic Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns
Anticholinergic. Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract
Allergic Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus
Hematologic Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia
Gastrointestinal Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion
Other Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling
Overdosage: Immediately hospitalize patient suspected of having taken an overdose Treatment is symptomatic and supportive I.V administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning See complete product information for manifestation and treatment
Dosage: Individualize according to symptom severity and patient response Reduce to smallest effective dosage when satisfactory response is obtained Larger portion of daily dose may be taken at bedtime Single *h* s dose may suffice for some patients Lower dosages are recommended for the elderly Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses
How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12 5 mg amitriptyline (as the hydrochloride salt) Available in bottles of 100 and 500, Tel-E-Dose® packages of 100, Prescription Paks of 50

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See the improvement in the first week[1]

In depressed and anxious patients, you can see the difference sooner—62% of total four-week improvement achieved in the first week with Limbitrol versus 44% with amitriptyline.[1]

In moderate depression and anxiety

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Journal of the Missouri State Medical Association

February 1988

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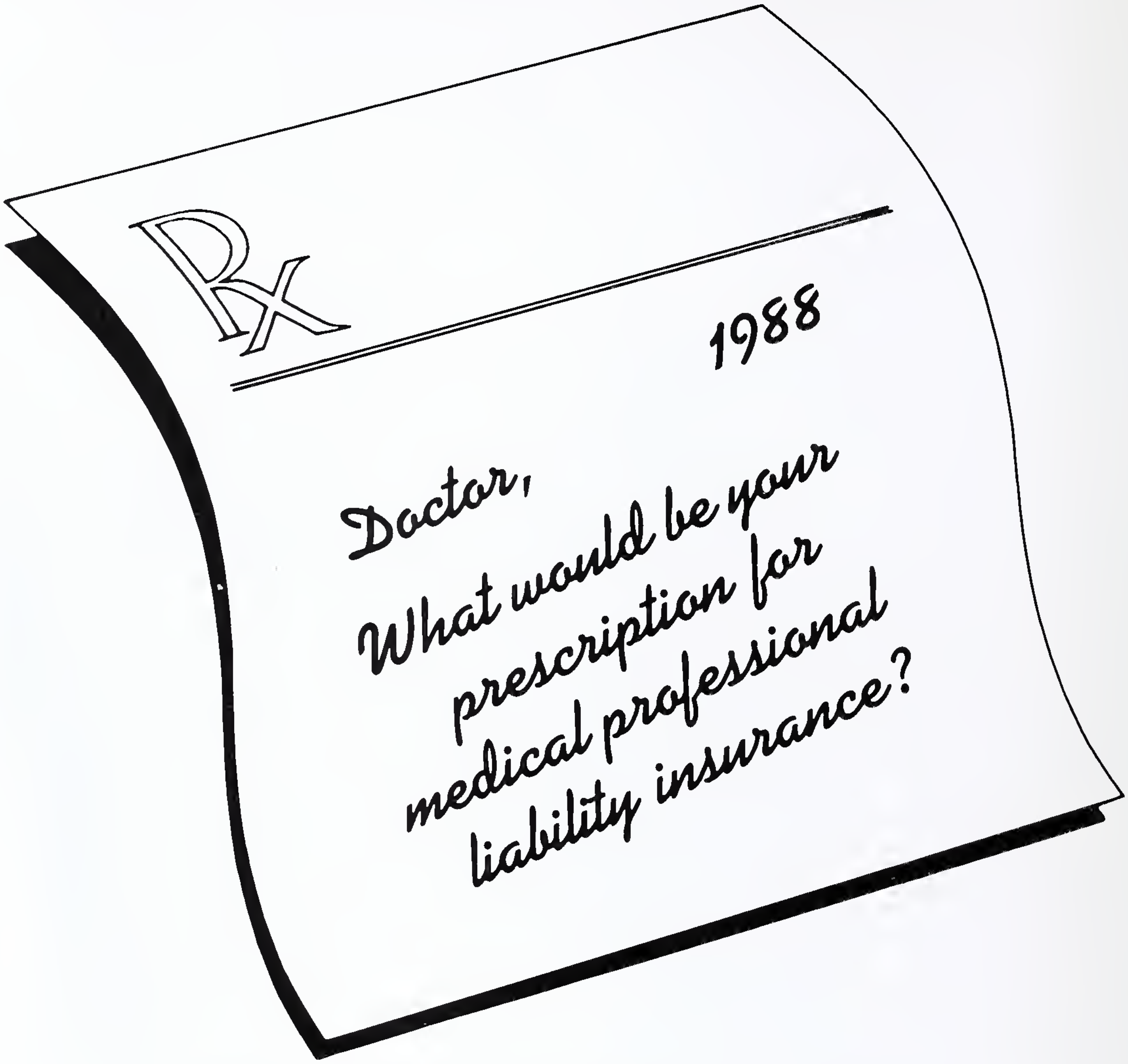
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"**Echoes**" by Margaret Kelly O'Brien of Manchester, MO is a watercolor representing an abstraction of architectural forms that create St. Louis Union Station. Ms. O'Brien feels the echoes of the dramas occurring in the building throughout its history; she reflects this emotion through the painting of the former train station, now a shopping center, on Market St.

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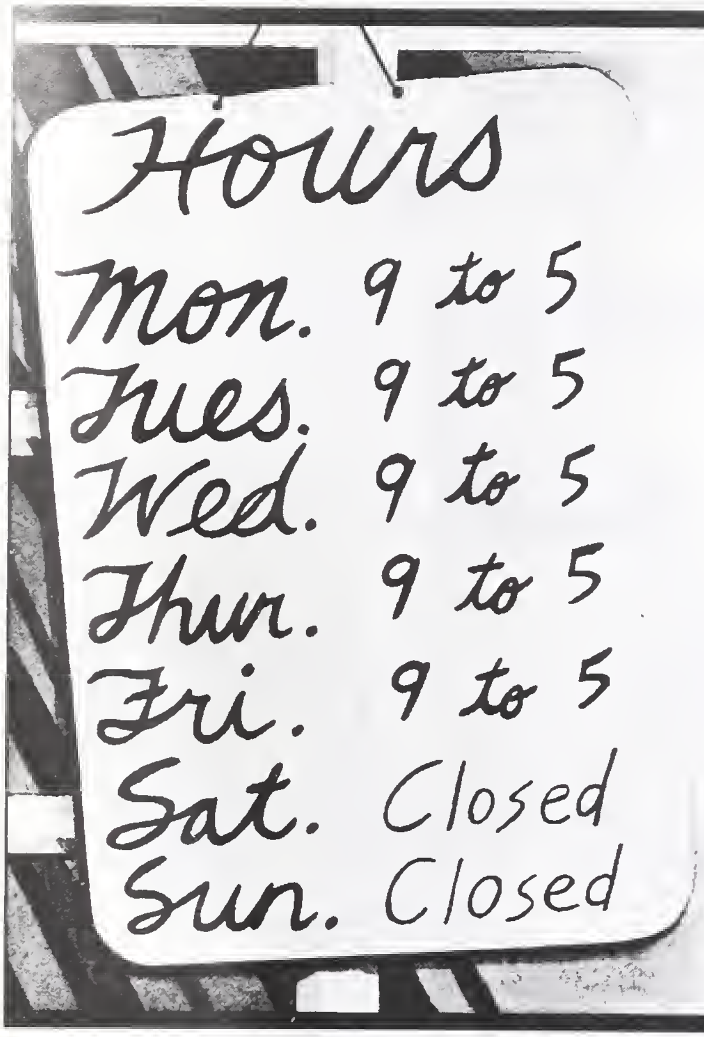

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MSMA Progress Notes

Convention 1988

Panel to address death and dying

Three outstanding specialists will discuss medical ethics at the 9:00 a.m. General Session on March 18 during the MSMA Annual Convention at the Hyatt Regency in Kansas City. Audience questions and comments are encouraged.

Speaking on "Death and Dying: The Ethical Issues" will be The Rev. Kevin O'Rourke, O.P., Russell Patterson, M.D. and Susan Wolf, J.D. Ronald Youmans, M.D. will serve as moderator.

Each speaker brings unique insight to this critical topic. Fr. O'Rourke is the director of the Center for Health Care Ethics at St. Louis University. Dr. Patterson is vice-chairman of the AMA Judicial Council and Ms. Wolf is an attorney at the Hastings Center. A past-president of MSMA, Dr. Youmans is chairman of the MSMA Judicial Council.

Plan now to observe and participate in this thought-provoking discussion. ■

Medicine dominates 1988 Session

The Missouri General Assembly got off to a running start January 6 as Legislators convened and immediately began pushing for their favorite issues. Quoting the President Pro Tem of the Senate, John Scott, "I expect this Session to be dominated by health issues."

MSMA members are urged to call or write their own senators and representatives to ensure that those who vote on health issues will have needed medical expertise before they make decisions.

If you have questions on a specific bill or wish to receive a copy of a bill, write or call MSMA headquarters.

Two items that will attract much attention will be AIDS and indigent care. Already more than two dozen bills have been prepared addressing various aspects of AIDS testing confidentiality or restrictions. MSMA is working with the Department of Health in hopes of keeping reason in any legislation and avoiding "knee-jerk" reactions. Currently, MSMA is supporting both *Senate Bill 599*, sponsored by Sen. Harry Wiggins, and *House Bill 1151*, sponsored by Rep. Quincy Troupe.

These bills, plus funds requested in Appropriation Bills, would stress physician and public education as the best defense against AIDS. The bills also would allow the state to crack down on persons who intentionally spread the disease and call for mandatory AIDS testing of prison inmates and some convicted sexual offenders. The bills do not seek mandatory testing of marriage license applicants or persons who enter hospitals. Such testing is being sought in other bills.

The direction for implementing a state-funded plan to provide health insurance for the medically-indigent has changed somewhat. Although *Senate Bill 459*, sponsored by Sen. Edwin Dirck, embodies the concepts of last Session's MedAssist Bill, it is now envisioned that an effort will be made to pass a *Joint resolution* which would place the entire issue on next November's ballot. The resolution would spell out certain guidelines for insurance coverage and offer a blend of sales and income tax percentages to pay for the plan.

House Bill 1159, introduced at the request of the Missouri Pharmaceutical Association, would require those physicians who dispense drugs to register with the Missouri Board of Pharmacy and mandate that such dispensing be done "at cost" with no profit for the physician.

Pharmacists say that the new "drug repackaging" trend has encouraged physicians to dispense as a way to increase income, not as a service for patients. They say it is an unethical practice for physicians and eliminate the physician/pharmacist crosscheck on drugs that protects patients. As written, the bill would not affect emergency prescriptions or sample drugs.

Although many more bills will be introduced which will be supported, opposed or monitored by the Association, so far some of the measures the *MSMA will support* are:

- *Senate Bill 458*, which would provide physicians with a state tax credit of 150% of their charge for an office visit if they provide free care to certain indigent patients.
- *Senate Bill 614* and *House Bill 958*, which would prohibit smoking in certain public places.
- *Senate Bill 651*, which would require physicians to report suspected intoxicated, injured vehicle drivers to the nearest law enforcement agency. The MSMA House of Delegates adopted this policy last Spring.
- *Appropriation Bills:* The MSMA is again attempting to secure more equitable reimbursement for physician fees under the Medicaid program. Although increases were approved by the Legislature last

Session, the funds were later vetoed by the Governor.

Legislators consider approximately 1,500 bills in a Session and there is no way they can become experts on each issue. They *want to hear* from physicians on bills which would affect your patients and your profession! Now is the time to be involved in the future of medicine in Missouri. Take the time to contact your senator or representative during the 1988 Session. Please review the following lists of some of the bills of interest to medicine, and contact your legislators now!

HOUSE BILLS

HB 922 (AIDS-Marriage). Would require marriage license applicants to file with the recorder of deeds a report of a negative laboratory test of AIDS or a physician's certificate that the applicant does not have AIDS.

HB 925 (Patient's Right to Medical Records). Would require physicians to provide a copy of patient's medical records, upon proper request, to the patient or legal representative within reasonable time, subject to the patient's condition and sound therapeutic condition. Follows ethical guidelines.

HB 927 (Good Samaritan-OB Care). Would place emergency OB care under the state's Good Samaritan Statutes.

HB 930 (Hospital Outpatient Charges). See **SB 443.**

HB 958 (Smoking). Would prohibit smoking in certain public places and require designation of specific non-smoking areas.

HB 969 (Seatbelt Requirements). See **SB 460.**

HB 971 (Psychiatric Care). Would add definitions "gravely mentally ill" and "involuntary outpatient treatment service" to law and establish procedures for ordering a gravely mentally ill person to submit to involuntary outpatient treatment.

HB 990 (All Terrain Vehicles). Would establish stiffer state regulations governing the use of all terrain vehicles.

HB 1044 (AIDS). A comprehensive bill dealing with AIDS which would require testing of prison inmates, marriage license applicants and those persons being admitted to a hospital.

HB 1076 (Medical Assistance-Benefits Payments). Would provide that Medicaid could pay for abortions for a pregnancy resulting from rape or incest when the mother tests positive to the HIV virus.

HB 1089 (Hospice Care). Would permit payment for hospice care for Medicaid patients who need such care.

HB 1125 (Hospital Cost Data). Would require all hospitals to submit an annual health data/cost report which would include the average cost of 18 enumerated services or procedures.

HB 1134 (Disproportionate Share). See **SB 508.**

HB 1139 (Medicaid-Transportation). Would add medically necessary transportation to physician-prescribed treatments to be paid for by Medicaid.

SENATE BILLS

SB 429 (Risk Retention Groups). Would place state regulations on formation and operation of risk retention and purchasing groups formed pursuant to the Federal Liability Risk Retention Act.

SB 443 (Hospital Outpatient Charges). Removes the Medicaid requirement that hospital outpatient services can be reimbursed at no more than 80% of costs.

SB 447 (Pharmaceuticals-Elderly). Would provide state financial assistance to qualified elderly who cannot afford pharmaceuticals.

SB 448 (Medicare Supplement Insurance). Would require such policies to contain an easily readable summary covering the conditions in the policies.

SB 458 (Tax Credits). Would provide physicians with a state tax credit of 150% of their charge for an office visit if they provide free care to certain indigent patients.

SB 459 (MedAssist). Would establish a state-funded health insurance plan to provide coverage for uninsured persons in the state. Based on a sliding-scale of premium payments by beneficiaries, the shortfall would be made up by various state taxes.

SB 460 (Seatbelt Requirements). Makes minor changes in state's seatbelt law. Several bills have been proposed to lessen the penalties or completely repeal the seatbelt law.

SB 465 (Health Care Surrogate). Would provide for written designation of a person to act as a surrogate able to make health care decisions for the grantor if the grantor becomes unable to do so.

SB 490 (Immunizations-Preschool). Would require each child to be properly immunized before being permitted to enter any preschool or day care program

SB 494 (Medicaid-Divide Assets). Would change Medicaid law so that in determining the value of property owned by the claimant, only half of the domicile value would be charged against the claimant. Many other bills will be introduced to eliminate the need for Medicaid recipients to "spend down" to qualify for benefits.

SB 508 (Disproportionate Share). Would provide that hospitals providing a disproportionate share of services to Medicaid patients receive enhanced funding.

SB 545 (Medical Records-Studies). Would authorize the Department of Health to receive information from patient medical records to conduct epidemiological studies. Places confidentiality requirements on information.

SB 550 (Part-Time Employees).

Would provide that health service corporations could not provide different insurance coverage for part-time employees than is provided for full-time employees. ■

Medicaid claims processing contract

The State of Missouri awarded the contract for processing Medicaid claims to GTE Data Services. The contract will begin in July of 1988 for a period of five years. GTE submitted the lowest bid of four companies on the contract. General American Consultec, the current contractor, has held the contract to process Medicaid claims since July 1985. ■

Faulty communication creates malpractice problems

The widely-held belief that an upswing in medical negligence begat the malpractice crisis is disputed by a two-year study that points to faulty patient communications.

The study, conducted by Edward E. Bartlett, Ph.D., president of a Maryland risk management consulting firm, finds the lion's share of malpractice claims are classified as "temporary, emotional or minor" injuries such as drug reactions, rashes, delays in starting treatment, and emotional upsets.

If a simple matter of communications is the actual culprit, then why do general statistics indicate widespread negligence as the problem? It all boils down to proximate cause — the idea that the plaintiff must demonstrate that the physician's actions were the direct cause of the alleged injury. A "breach of communication" charge is not as persuasive as proving that the physician acted negligently by not ordering the right treatment, or vice versa.

The study suggests that from a risk management standpoint, a doctor's best defense is a good offense: improved informed consent, patient grievance mechanisms, and recognition of patients' rights.

The study lists ways to improve physician/patient relations through more thorough communications.

Informed consent: Instead of viewing informed consent as an obligation imposed upon them by the legal profession, Bartlett suggests that physicians consider it a means of assuring agreement between the expections of both parties about the outcome of treatment. It's more than signing on the dotted line; the informed consent process really begins from the moment of the first encounter.

You don't have to disclose every risk and complication ever reported — just the ones that are pertinent to the case. The content of informed consent includes diagnosis; nature, purpose and expected outcome of the treatment; risks and consequences; feasable alternative treatment and prognosis without treatment.

One of the keys to hassle-free informed consent, according to Bartlett, is a good informed consent form that can be understood by the non-medical, non-legal individual, yet says more than, "The risks and the nature of the operation have been explained to me."

Make medical information more available. Research shows that one of the major causes of patient dissatisfaction is a lack of information concerning condition, prognosis and regimen. People are no longer willing to leave everything in their doctor's hands — not so much out of a lack of trust, but because they are accustomed to easy access to health care information. Avoid medical jargon, reinforce facts with a teaching aid if possible, repeat important information and involve the family.

Involve patients in medical care decisions. Many patients report dissatisfaction because they are not involved in their medical care. The study suggests different ways of getting the patient more involved: discussing different treatments and their effect, possibly allowing the patient to read his own chart, medication self-administration programs, cooperative care units, and self-care education.

Increase patient trust. Physicians communicate empathy through self-disclosure, sharing feelings, allowing silence and offering to help. This reassures the patient. Listen to the way you say things — you know what you mean, but how does it come out?

Bartlett says effective listening is one of the most difficult skills for physicians to master, so be sure to hear the patient out before asking the next question.

By listening, the patient's real concerns will be much easier to elucidate. Often, the patient's real concern has little to do with the major complaint. By talking to, not at, your patient and truly listening to what he is saying, you can save yourself significant time in meeting those really, often emotional, needs. As one malpractice attorney quoted in the study commented, "It's very hard for a jury to find against a doctor if they believe he cares."

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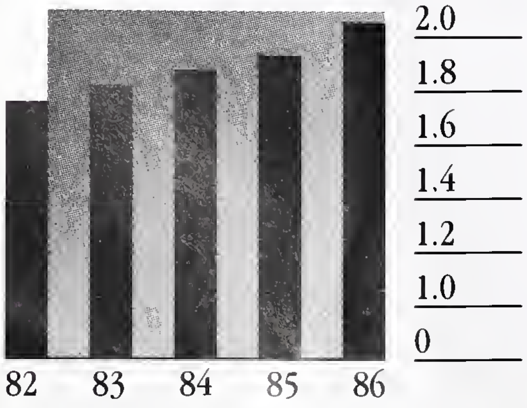

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EDITOR'S DESK

by Jordan W. Burkey, M.D.
Editor

When we consider the most significant diseases, the circulatory system really deserves the greatest share of our attention.

The heart of medicine

"Getting to the heart of the matter" is an old adage.

This concept definitely applies to medicine. The care we give our patients comes in thousands of forms for tens of thousands of complaints, but when we consider the most significant diseases, the circulatory system really deserves the greatest share of our attention.

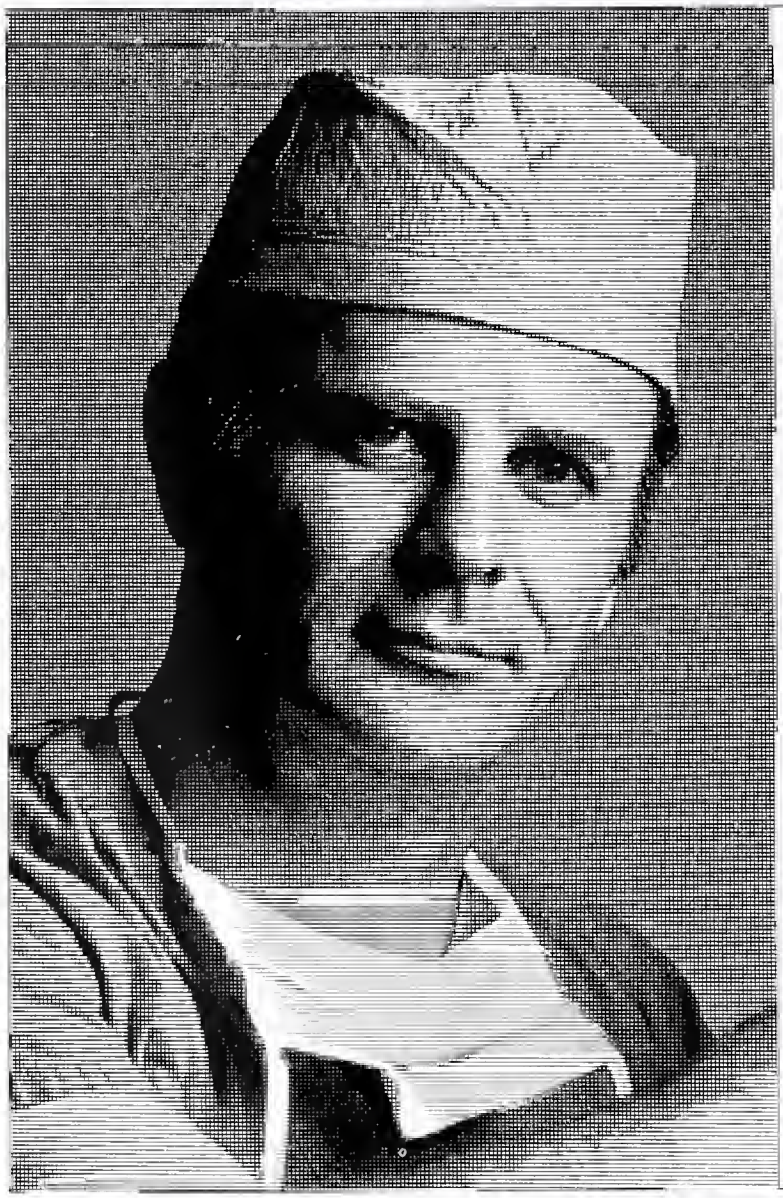
Vital statistics tell part of the story. Forty-five percent of all deaths in Missouri last year were directly ascribed to the heart and circulatory system; a good share of other "causes of death" have vascular components. Consider some of the great medical killers of years gone by. Tuberculosis, syphllis and childbirth all together were the listed cause of death of three persons in St. Louis County last year, while 7,000 died of cardiovascular disease.

Perhaps, as some claim, we are training too many cardiologists and cardiac surgeons, but look at the improvement in care which has come about in the past 25 years. Medical management has been fine-tuned, and the knowledge of proper prospective and ongoing care is now widely known and available to a great segment of the population. Cardiac surgical procedures, along with the now popular angioplasty, have also added a quality of life for those with heart problems. Healthy arguments go on concerning the best care — medical management or angioplasty vs open heart surgery; tissue plasmogen activator vs streptokinase, artificial vs donor hearts.

No doubt there will be continuing progress in the management of circulation and in another 50 years today's treatments will look like the leeches and purgatives of yesteryear. Implantable defibrillators are now being marketed. Minature sensors in wrist bands will constantly read out the cardiac status of the wearer. Cholesterol-free food substitutes should slow vessel wall disease pattern. Drug dosages will be fine-tuned to individual needs. Unlimited dose levels will be available through constant delivery systems with plasma monitoring guaranteeing best dosage regimens. There can even be dose adjustments to allow for personal circadian frequency variations.

Heart disease is a medical monster from any standpoint. In dollar cost, the American Heart Association estimates the direct cost of medicine and care for heart disease in the United States in 1987 to be $85 billion. Personal loss from the morbidity of circulatory problems is beyond measure. The crucial importance of the heart in our health should not be lost on any physician. It might seem that one had failed as a doctor if he utilized his training to perform the niceties of medical care for years, yet lost a patient because he was not properly versed in CPR at a crucial time.

Thanksgiving is an occasion to give thanks for a good harvest. Perhaps a moment on Valentine's Day might be a proper time to give thanks for all the progress in the care of our hearts which should help us reach the goal of dying healthy at an old age. ■



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Auxiliary Message

by Sandy Mitchell
MSMA Auxiliary
President

Today, medicine's volunteers are confronted with drug and alcohol awareness, teen sexuality, AIDS, physician impairment, establishing a smoke-free society and teen suicide prevention.

Auxiliary projects across the state

There are certain phrases that you must never utter to a Missouri State Medical Association Auxiliary member. Three are: 1) I have nothing to do; 2) If only there was something meaningful in my life; 3) I'm bored.

Be forewarned, if you speak these words to an active Auxilian, you will find yourself recruited, re-educated and revitalized. For physician spouses who feel they need direction we offer an exciting endeavor known as community service or health education. Health education has recently taken on a new dimension for those of us in Missouri medicine. Five to ten years ago our major projects were promoting immunizations and blood pressure screenings. Today, medicine's volunteers are confronted with drug and alcohol awareness, teen sexuality, AIDS, physician impairment, establishing a smoke-free society and teen suicide prevention.

No longer can we address our communities on comfortable issues. We must now relay disturbing statistics to increase community awareness of preventing the spread of disease and associated health problems. If we approach this challenge realistically we will see that this is the medical volunteer's greatest hour. The possibilities are limitless once the challenge is accepted.

This year your Auxiliary has held workshops on AIDS and its effect on the medical family. Education within the medical community must be the first step before community awareness can be stressed. As a result, our members are attending training sessions for public speaking engagements as well as for press and television interviews on AIDS. The Auxiliary is assisting with education of physicians and their staffs regarding safe office practice plus dispelling fears and providing realistic information on coping with the AIDS crisis, not only in our medical practice but also in our communities.

Adolescent health is this year's primary educational emphasis. This broad concern allows diversity of community projects in addition to opening many educational doors for our members.

In cooperation with medical students at the University of Missouri-Kansas City, Auxilians are working to promote an educational program on teenage sexuality suitable for distribution to Missouri high schools. Young people are not satisfied with a physical education instructor reading an outdated chapter in a health book or showing a film on adolescence.

Today's youth demand correct, detailed information on anatomy and physiology, birth control, STD's and development of relationships. UMKC medical students have developed a

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Auxiliary Message

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program proven effective in the Kansas City area and with the help of the Auxiliary, this program will be made available on video cassette to all counties in the state.

Cole County Auxilians have demonstrated community leadership in conjunction with the school district to establish a teen suicide prevention program. Due to the insight and hard work of the Cole County Auxiliary, teachers, students and parents will have access to an innovative program of recognizing and intervening in potential suicide situations. The efficiency of this program has already been tested and should be in place and functioning in the near future.

Pettis County members are actively involved in a new substance abuse prevention center recently established in Sedalia. The center's goals are to identify and provide resources that enable people to take responsible and participatory action to prevent the abuse of alcohol and other drugs.

Physicians are often the first in the community to detect a need for health education or intervention. You should be aware of the resources you have in the Missouri State Medical Association Auxiliary and your county auxiliary. If a program does not already exist to meet the needs of your community chances are the Auxiliary could develop a beneficial program.

You need only ask — we are your Auxiliary, ready to help. ■

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MSMA Member Viewpoint

The Golden Age of Medicine: 1966-1980

George M. Bohigian, M.D.

"Those who compare the age in which their lot has fallen with a golden age which exists only in their imagination, may talk of degeneracy and decay; but no man who is correctly informed as to the past will be disposed to take a morose or desponding view of the present."[1]

Cycles occur in both nature and human events. Regrettably, medicine has experienced this natural cycle. I believe that the years of 1966 through 1980 may be regarded as the golden age in American medicine for physicians. Physicians may remember this period as the zenith of American medicine in quality, prestige, research productivity and remuneration. I believe we are now in the descending curve of this multifaceted cycle, but that this, too, is both predictable and relatively short-lived.

According to older physicians, in the years 1940 to 1950 doctors made a comfortable living but not the high financial rewards of today. In the mid-'60s, infusions of monies from the federal government, e.g. Medicare (1966), large National Institutes of Health research grants, Hill Burton funding for hospitals and funding for new technologies pushed American medicine to the forefront and attracted talent from around the world. The golden age of medicine may have come to a close in the early '80s with the advent of cost control, fee freezes, fewer research grants, limitation by third parties, litigation, and the conservative mood of the country. Some believe we are now reaping the benefits of this golden age for our patients and the public.[2]

The Harris Survey taken in 1966 demonstrated that 73% of the public had a great deal of confidence in medicine compared to only 39% of those surveyed in 1985. Despite this statistic, Americans still express more confidence in medicine than other institutions or professions (Fig 1, Table 1).[3]

Federal spending for the National Institutes of Health has shown a flattening out in the last several years, jumping from almost $1 billion in 1970, or $4.00 per capita, to $3 billion dollars, or $13.00 per capita in 1980, leveling out to $4 billion, or $19.00 per capita in 1985 (Table 2).[4]

Physician remuneration is also starting to level out. In 1968, the average income after expenses and before taxes was $35,000; in 1975 it was $56,000; in 1985 average income was $113,000. Paralleling for inflation, physician incomes appeared to rise with the consumer price index, which was 100 in 1967 and 327 in 1985 (Fig 2).[5] On closer examination, physicians inflation-adjusted income peaked in 1983 and is now starting to decline, (especially in general practice, family medicine, internal medicine, Ob-Gyn, pediatrics and psychiatry) (Table 3).[6] This may be related to the increasing number of physicians and the correspondingly decreasing patient visits per week. The average patient visits per week decreased from 130 patients in 1982 to 118 in 1986, a decrease of almost 10%.[6] The number of physicians jumped from 155 physicians per 100,000 population in 1965 to 228 per 100,000 population in 1983.[7] The growth in per capita physicians

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reflects the Health Profession and Education Assistance Act of 1973 which encouraged medical schools to increase their enrollments. Medical statistics project that between 1985 and the year 2000, there will be another 12% increase in physicians.[6] This is already spawning more active competition for patients with advertising and entrepreneurism.

The short-term outlook seems unsettling since it appears to include less prestige, more advertising and fewer financial rewards, but this is all part of a larger cycle. Before the turn of the 20th century, we had many individuals calling themselves doctors, hundreds of medical schools and fierce competition with blatant advertising selling everything from cures for rheumatism to snake oils. This cycle bottomed out approximately 75 years ago. In 1910, the publication of the Flexner report accelerated a move toward fewer medical schools and increased quality of medical education with the resultant lowering of the physician/population ratio. Since that time the quality of American medicine has climbed until the early 1980s.

We are now in a downward cycle; I believe in 25 years we will have reached a low point in medicine due to increased competition, marked advertising, less prestige, stringent government and third party controls, as well as less financial reward. This may be discouraging for physicians but it is an inevitable part of the cyclical process. Power and wealth have somehow assumed greater emphasis than sensitivity and service. Just as the seasons ensure regeneration, medicine's pattern will renew and regenerate itself as a "calling and an art" as well as a science. During the coming 30 to 50 years, those attracted to the practice of medicine will perhaps want to care for patients, regardless of the prestige or financial reward.

The preceding is my prediction — despite the admonition of F. Allen in his book *Only Yesterday:* "Finally, one must admit that prophecy is at best the most hazardous occupation."[8]

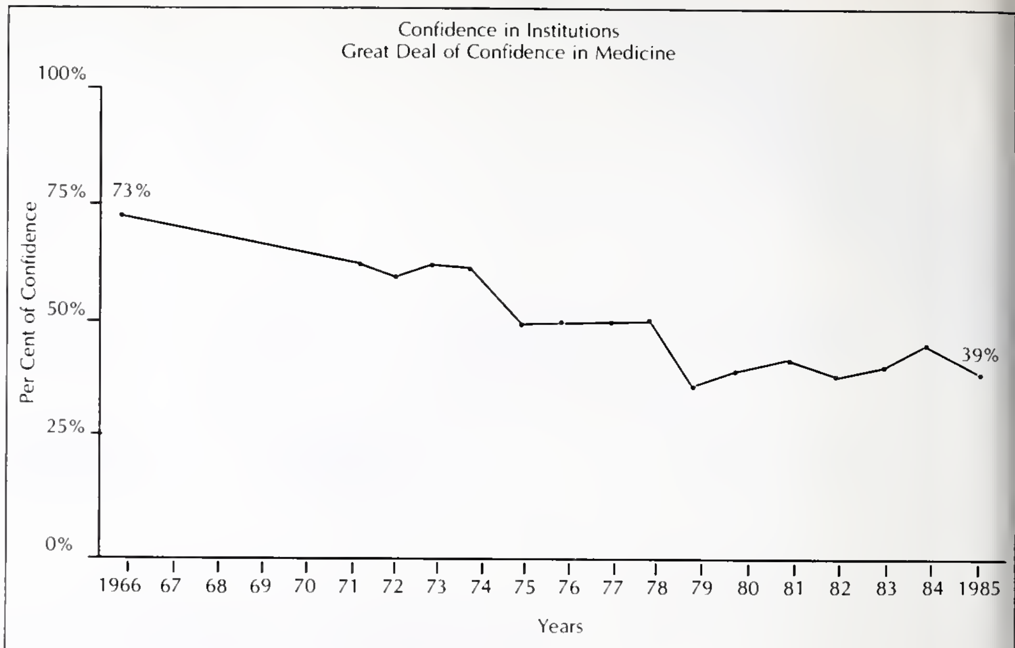

Fig 1

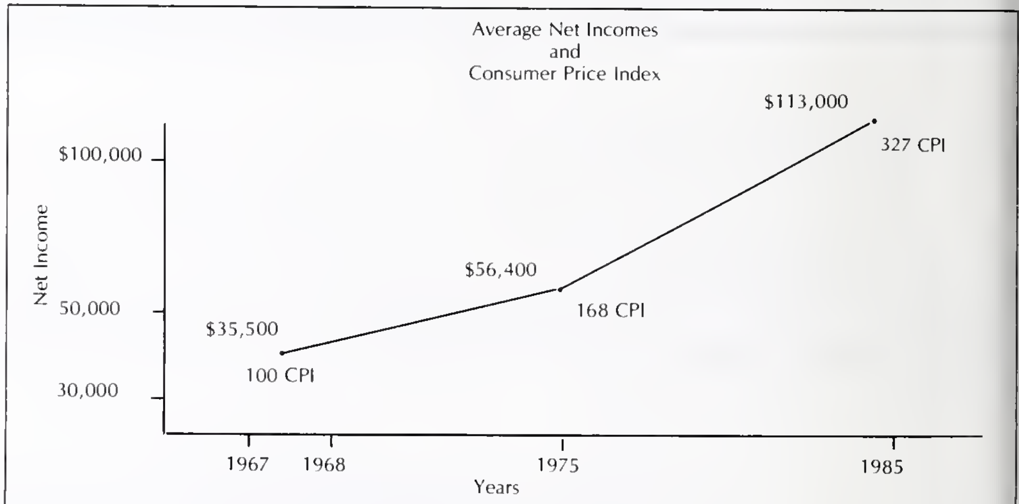

Fig 2

Continued on page 74

Table 1

CONFIDENCE IN INSTITUTIONS

	1985 %	*1984* %	*1983* %	*1982* %	*1981* %	*1980* %	*1979* %	*1978* %	*1977* %	*1976* %	*1975* %	*1974* %	*1973* %	*1972* %	*1971* %	*1966* %
Medicine	39	43	35	32	37	34	30	42	43	42	43	50	57	48	61	73
Major educational institutions such as colleges and universities	35	40	36	30	34	36	33	41	37	31	36	40	44	33	37	61
The military	32	45	35	31	28	28	29	29	27	23	24	33	40	35	27	61
The White House	30	42	23	20	28	18	15	14	31	11	x	28	18	x	x	x
The U.S. Supreme Court	28	35	33	25	29	27	28	29	29	22	28	40	33	28	23	50
Television news	23	28	24	24	24	29	37	35	28	28	35	31	41	x	x	x
Organized religion	21	24	22	20	22	22	20	34	29	24	32	32	36	30	27	41
The executive branch of the federal government	19	x	x	x	24	17	17	14	23	11	13	28	19	27	23	41
Local governments	18	23	18	x	x	x	x	19	18	21	x	x	28	x	x	x
Major companies	17	19	18	18	16	16	18	22	20	16	19	21	29	27	27	55
State governments	16	23	18	x	x	x	x	15	18	16	x	x	24	x	x	x
Congress	16	28	20	13	16	18	18	10	17	9	13	18	x	21	19	42
The press	16	18	19	14	16	19	28	23	18	20	26	25	30	18	18	29
Organized labor	13	12	10	8	12	14	10	15	14	10	14	18	20	15	14	22
Law firms	12	17	12	x	x	13	16	18	14	12	16	18	24	x	x	x

x = not asked

Table 2

FEDERAL OUTLAYS FOR HEALTH, BY TYPE OF PROGRAM: 1970 TO 1985
[1970, for year ending June 30; beginning 1980, ending September 30]

	Total Outlays (mil. dol.)							*Overlays per Capita*[1]		
Type of Program	*1970*	*1980*	*1981*	*1982*	*1983*	*1984*	*1985, est.*	*1970*	*1980*	*1985, est.*
Total outlays	12,977	61,735	72,947	81,534	89,514	96,819	109,756	$64	$272	$461
Medicare[2]	6,213	32,089	39,149	46,568	52,588	57,540	66,256	30	141	278
Health care services	3,057	17,985	21,202	21,782	23,037	24,522	27,244	15	79	114
Medicaid	2,727	14,028	16,948	17,391	18,985	20,061	22,985	13	62	96
Health block grants	—	—	—	663	1,273	1,299	1,433	—	—	6
Other	330	3,958	4,254	3,730	2,779	3,162	2,826	2	17	12
Hospital and medical care for veterans	1,800	6,515	6,965	7,517	8,272	8,861	9,621	9	29	40
Health research	1,054	3,442	3,836	3,948	3,973	4,379	4,961	5	15	21
National Institutes of Health ..	917	3,029	3,394	3,470	3,555	3,963	4,437	4	13	19
Other	137	413	442	478	418	416	524	1	2	2
Consumer safety	177	674	688	698	720	762	815	1	3	3
Education and training of health care work force	633	719	779	670	578	388	478	3	3	2
Research training	(NA)	(NA)	236	195	194	195	234	(NA)	(NA)	1
Clinical training	(NA)	(NA)	543	374	325	166	202	(NA)	(NA)	1
Other	(NA)	(NA)	—	101	59	28	41	(NA)	(NA)	(Z)
Occupational safety and health .	49	328	353	336	346	367	381	(Z)	1	2
Deductions for offsetting receipts	−6	−17	−25	15	—	—	—	(−Z)	(−Z)	—

— Represents zero.
NA Not available.
Z Less than 50 cents

[1] Based on Bureau of the Census estimated resident population as of July.

[2] Adjusted for premiums and collections.

Source: U.S. Office of Management and Budget, *The Budget of the United States Government,* annual.

TABLE 3

AVERAGE ANNUAL NET INCOME AMONG NON-FEDERAL PATIENT CARE PHYSICIANS (EXCLUDING RESIDENTS) BY PHYSICIAN AGE AND SPECIALTY, 1981-85

Net Income	*1981*	*1982*	*1983*	*1984*	*1985*	*Percent Change 1981-85*
Total Population	$ 93,000	$ 99,500	$106,300	$108,400	$113,200	21.7%†
Age						
35 and under	67,300	73,300	77,000	78,900	85,100	26.4†
36-45	101,000	108,200	110,200	117,300	116,800	15.6†
46-55	108,900	116,500	133,600	129,200	135,300	24.2†
56-65	95,800	99,500	103,100	104,100	115,200	20.3*
Over 65	65,500	64,300	71,900	78,300	83,900	28.1*
Specialty						
General Practice	72,200	71,900	68,500	71,100	77,900	7.9
Medical Specialties	78,900	81,700	85,600	93,100	93,200	18.2†
Surgical Specialties	116,800	126,700	138,900	142,400	146,800	25.7†
Other Specialties	93,900	105,300	112,600	111,300	117,800	25.4†
Inflation-Adjusted Income (1981 Dollars)	*1981*	*1982*	*1983*	*1984*	*1985*	*Percent Change 1981-85*
Total Population	$ 93,000	$ 93,800	$ 97,100	$ 94,900	$ 95,700	2.9%
Age						
35 and under	67,300	69,100	70,300	69,100	72,000	6.8
36-45	101,000	102,000	100,600	102,700	98,700	−2.3
46-55	108,900	109,800	122,000	113,200	114,400	5.0
56-65	95,800	93,700	94,100	91,100	97,400	1.7
Over 65	65,500	60,600	65,700	68,500	70,900	8.3
Specialty						
General Practice	72,200	67,700	62,500	62,200	65,900	−8.8
Medical Specialties	78,900	77,000	78,100	81,500	78,800	−0.1
Surgical Specialties	116,800	119,400	126,800	124,700	124,100	6.3
Other Specialties	93,900	99,200	102,800	97,500	99,600	6.1*

*Statistically significant at 95% confidence level based on two-tailed t test.
†Statistically significant at 99% confidence level based on two-tailed t test.
SOURCE: Socioeconomic Monitoring System Core Surveys.

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Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:
Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

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Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

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Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40 °C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) Injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

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Contraindications: *Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.*

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. *If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K$^+$ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K$^+$ intake.* ***Associated widened QRS complex or arrhythmia requires prompt additional therapy.*** *Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.*

Precautions: *The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin[ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.*

Adverse Reactions: *Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.*

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

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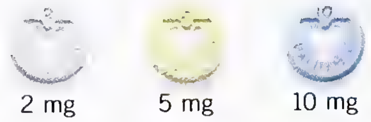

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The Missouri Arthritis Program

Legislation, Implementation and Funding of a Regional Centers Program

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Missouri's statewide arthritis program, with its regional treatment and education centers and comprehensive approach to management, is unique in its approach to the care of the chronically disabled. The network of centers brings specialized care closer to all Missourians who suffer from rheumatic diseases.

In January 1980, the Missouri Task Force on Arthritis submitted to the Governor and the Missouri General Assembly a three-volume report regarding the status and availability of services for rheumatic disease patients in this state. The task force was organized in 1976 in response to a coalition of concerned citizens and health professionals who approached the governor regarding formation of a statewide fact-finding group. The Board of Health, following a federal model, formed a task force and charged it ". . . to survey State, regional, and local health problems and activities relating to arthritis, and to assess the adequacy, technical soundness, and coordination of such programs and activities. . . ."[1]

The task force first met in September 1976 and included nine allied health professionals, six physicians, four arthritis patients, representatives of the Arthritis Foundation, a state senator, an attorney, and members of the general public. Work groups were developed for the following areas: health care, manpower, professional education, public education, research, and public affairs.

Subsequently, public hearings and site visits were held in seven designated regions in Missouri: St. Louis metropolitan, Southeast, Northeast, Central, Southwest, Northwest, and Kansas City metropolitan (Fig 1). Task force members contacted local community

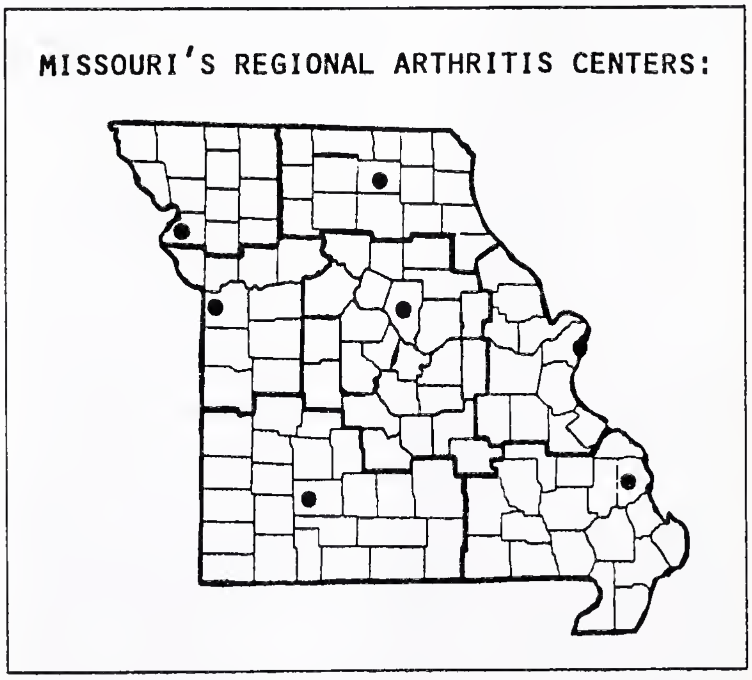

Fig 1. Map of Missouri showing the location, boundaries, and counties served by each of the seven regional arthritis centers.

leaders and mobilized regional news media to advertise the purpose and dates of the public hearings. In addition, more than 100 volunteers were recruited to assist in an arthritis needs-assessment program specific to Missouri. Experienced local physicians, nurses, patients, physical and occupational therapists, and social workers provided highly effective public testimony. The Arthritis Task Force also visited available medical care facilities in cities where public hearings were held.

An Overview of the Problem

Nationally, the estimated prevalence of the rheumatic diseases is 6% to 10% of the adult population,[2-4] and rheumatoid arthritis alone affects approximately 1% to 3% of all persons.[5, 6] Because of the numbers of patients, only 5% of arthritis care can be provided by rheumatology specialists. Thus, 95% of all rheumatologic care is provided by primary care physicians who often have limited knowledge of the musculoskeletal examination, and there are low referral rates of complicated cases.[7-9]

Rheumatic diseases often have major economic consequences, are among the most prevalent chronic illnesses,[10] and account for 15% of those people disabled by chronic disease.[11, 12] The estimated annual cost of arthritis, non-articular rheumatism, synovitis, bursitis, gout, osteomyelitis, disc disease and back pain is $23 billion.[13] A summary of the direct medical costs, and the indirect costs of lost productivity, is shown in Table 1. Woolley et al have estimated that the total costs for arthritis and back pain will rise to $95 billion by the year 2000.[13] Frustrated patients often seek non-traditional, unproven forms of treatment, whose promotions cheat people with arthritis out of $1 billion a year. The "quackery" business in arthritis is bigger than in any other disease. For every dollar spent in arthritis research in 1981, $25 was spent on unproven remedies.[14]

Other studies have addressed the frequent psychological, social, sexual, and vocational changes caused by arthritis.[15, 16] Meenan and associates, for example, found in rheumatoid arthritis patients a divorce rate of 18% (versus a national average of 11%), an unemployment rate of 59%, and pronounced changes in leisure time activities in 85% of patients. In 6% of families, one member had to change his or her employment status to compensate for the effects of arthritis.[15] Psychological disturbances in response to loss of job, changes in social position, and family problems are also common. Further, as their physical mobility and appearance worsen and dependency increases, arthritis patients may suffer a decline in social confidence and sexual function.[16]

Developing legislative awareness of the prevalence of rheumatic diseases, the lack of adequate subspecialty care, and the economic and psychosocial costs of musculoskeletal conditions, led to congressional hearings in 1974, and passage of the National Arthritis Act in 1975. A National Commission on Arthritis and Musculoskeletal Diseases was then assembled and, following an in-depth assessment, recommended federal funding of a national network of Multipurpose Arthritis Centers (MAC) to address these problems.[17] However, subsequent federal appropriations for the community components of MACs were inadequate to support the diversity of programs that would be necessary to meet community needs. A few states, therefore, initiated their own governmental actions. Leaders in Missouri found our local community needs to be greater, and often different from those reflected by national averages. Among all states, Missouri ranks fifth in its proportion (13.3%) of the population age 65 and older,[18] and it is known that the prevalence of rheumatic diseases increases with age.[17]

Table1

Cost of Musculoskeletal Diseases, 1983*

Disease	*Indirect Cost*	*Direct Cost*	*Total*
Rheumatoid Arthritis	215	777	992
Osteoarthritis	220	2,066	2,280
Other arthritis	820	1,739	2,560
Lumbar disc	1,084	2,020	3,104
Back pain	2,658	7,648	10,307
Osteoporosis	415	3,416	3,821
Total	5,414	17,667	23,071

* *Values expressed as millions of dollars; data from McDuffie FC.*[12]

The Missouri Task Force on Arthritis in 1978 found many of the same locally expressed concerns and questions as had been stated during the 1974-75 national hearings. In Missouri, however, other concerns were expressed about our rural characteristics, which lead to a relative scarcity of allied health professionals, and long travel distances to reach adequate referral centers. Large numbers of Missourians testified to the need for early detection and correct diagnoses, stating that many primary care physicians lacked up-to-date skills and knowledge to do this. There is a significant geographical maldistribution of physicians and medical facilities in Missouri. Even when one considers only primary care physicians, the standardized rates of physicians per 10,000 population range from 7.2 in mid-Missouri to 2.8 in the Lake of the Ozarks area.[19] In many instances, individuals couldn't tolerate or afford extended travel for medical care. The costs of medications, physical therapy, and hospitalization were frequently mentioned sources of severe financial problems, prohibiting some patients from seeking care altogether. Others testified that, due to lack of knowledge of the rheumatic diseases by family members, friends and the public, many arthritis patients were receiving little, if any, needed understanding and emotional support.

The task force also encountered several positive aspects in its survey of Missouri's arthritis education, service, diagnostic and treatment capabilities. Missouri had long-established centers with excellent records in treating arthritis in four regions, and the potential for rapidly developing several more centers. Numerous community, political, and medical leaders testified that with a modest fiscal commitment from the state, existing and potential centers could have a profound effect on increasing the adequacy and availability of arthritis-related services offered to Missourians.

In the 1980 Missouri Task Force on Arthritis report to the governor, it was recommended that: a) a Missouri Arthritis Advisory Board be formed, b) a position be created for a state arthritis program coordinator, and c) at least one Regional Arthritis Center (RAC) be established in each of seven designated areas in Missouri. Proposed RAC activities included: 1) educational programs for patients and the general public, 2) continuing education for non-arthritis specialists who treat rheumatic disease patients, 3) community education in underserved areas, 4) assessing availability and access to regional health services, and 5) assuring optimal professional education for arthritis specialists.

Legislative Initiatives

A legislative bill, containing the recommendations of the "State Arthritis Plan," was introduced in 1980. Despite widespread evidence of grassroots support, the bill passed the Senate but failed in the House. In 1981, a similar bill passed in the House but failed in the Senate, and in 1982 the state's fiscal constraints resulted in its failure to pass again.

In the fall of 1982, however, in view of continued grassroots and legislative support, the Director of the Division of Health established the Missouri Arthritis Advisory Board (MAAB) as an official state advisory body. Temporary support was provided via a federal preventive health block grant of $31,000. The MAAB consisted of 25 people nominated to serve for four-year terms. The MAAB then developed guidelines for a request for proposals for Regional Arthritis Centers.

In 1983, legislation was once again submitted, with strong support from the Missouri Division of Aging and the Division of Health. Finally, an arthritis act was passed and signed into law by Governor Christopher Bond in June 1984. Missouri's constricted fiscal circumstances did not permit a general revenue appropriation at that time, but with an officially established State Arthritis Program, progress was now possible. Under the jurisdiction of the Bureau of Chronic Diseases, Division of Health,* the Missouri Arthritis Advisory Board and a newly appointed Program Review Committee continued their efforts.

The Missouri Arthritis Program

The Missouri Arthritis Advisory Board (MAAB) serves in an advisory capacity to the Program Review Committee. The MAAB roles include: 1) developing and recommending guidelines for programs and grant applications, 2) considering changes in arthritis program content and direction, and 3) making final recommendations to the Director of the Department of Health regarding programs and grants of the State Arthritis Program.[20] The Missouri arthritis program coordinator is appointed by the Director of the Department of Health, serves as executive administrator of the Program Review Committee (PRC), and coordinates activities of the PRC and the MAAB.

The Program Review Committee consists of 15 members, two from each of the seven regions, and one at-large member. The PRC "shall review, make site visits, and determine and make recommendations to the board (MAAB) on the merit of regional arthritis center applications."[20] PRC members are appointed for four-year terms. A broad spectrum of concerned citizens have volunteered to provide leadership and direction to the Missouri arthritis program and serve on these committees. They include nurses, physicians, retailers, physical therapists, bankers, scientific researchers, and arthritis patients. All share a common interest in providing hope for the 760,000 Missourians who live with rheumatic diseases.

Regional Arthritis Centers

The most visible part of the arthritis program is its Regional Arthritis Centers (RACs). Mandated to be established in each of seven regions, the RACs are a local source of specialized health care and education for rheumatic disease patients. The long-range goal is to make optimal diagnostic, treatment, and rehabilitation services accessible to all persons with arthritis and related musculoskeletal diseases in Missouri. Major activities of the RACs include: 1) operating programs in the areas of education of patients, their families, and the public, 2) providing education at all levels for various health professionals, and 3) facilitating improved patient care and other arthritis control activities aimed at benefiting communities served by the center.[20]

During the summer of 1984, the Division of Health and the Division of Purchasing, Office of Administration, worked together with the MAAB to produce a Request for Proposals (RFP) to initiate a contracting process. Announcements of the RFP were mailed to all hospitals in the state, and to newspapers in each of the seven regions. Queries were received from 117 potential applicants. In all, 11 formal grant applications were ultimately submitted. Peer review of the written applications was conducted by the Program Review Committee (PRC) and included site visits by PRC members to applicant institutions. Merit review was based on four weighted criteria: implementation of plan (40%), expertise (25%), experience (10%), and total cost (25%).

While the review process was proceeding, concerned citizens and community leaders were again urging fiscal implementation of the Missouri arthritis program. These efforts resulted in a general revenue appropriation of $56,000. Subsequently, block grant funds from the federal Public Health Grants of 1984 and 1985 became available, leading to first year total

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* *The Division of Health was administratively reorganized as the Department of Health through legislation passed in 1985.*

Table 2

Regional Arthritis Centers

	Telephone	*Contact Person*
Central Central Missouri Regional Arthritis Center MA427 Health Sciences Center University of Missouri Columbia, MO 65212	(314) 882-8097	Lavona Virgen
Kansas City Metropolitan St. Luke's Regional Arthritis Center Rehabilitation Services 801 W. 47th Street, Suite 200 Kansas City, MO 64111	(816) 932-2020	Sonia Rosario
Northwest Northwest Regional Arthritis Center Heartland Hospital West 801 Faraon St. Joseph, MO 64501	(816) 271-7979	Merry Burtner
Northeast Northeast Missouri Regional Arthritis Center Kirksville Osteopathic Medical Center 800 W. Jefferson Kirksville, MO 63501	(816) 626-2049	Doris Fountain
St. Louis Metropolitan Washington University Division of Rheumatology, P.O. Box 8045 660 S. Euclid St. Louis, MO 63110	(314) 362-7601	Donna Lewis-Stevens
or		
St. Louis University School of Medicine R215 Doisy Hall 1402 S. Grand Blvd. St. Louis, MO 63104	(314) 577-8467	Terry Moore, M.D.
Southeast Southeast Missouri Regional Arthritis Center Southeast Missouri Hospital 1701 Lacey Cape Girardeau, MO 63701	(314) 651-5537	Joan Stehr
or		
St. Francis Medical Center 211 St. Francis Drive Cape Girardeau, MO 63701	(314) 339-6175	Roger Kluesner
Southwest St. John's Regional Arthritis Center St. John's Regional Health Center 1235 E. Cherokee Springfield, MO 65804-2263	(417) 885-3446	Margaret Lindsey

fiscal support of $116,332 for funding the RACs.[21]

During the summer of 1985, the Missouri Department of Health officially designated eight Regional Arthritis Centers, on the basis of excellence determined by PRC merit review (Table 2). These eight centers, strategically located in the seven designated regions (Fig 1), are actively developing their programs. During 1986-87 the Missouri RACs conducted education programs attended by 2,000 health professionals. In the area of public activities, over 3,500 attended presentations, including community forums, speaker bureaus, or other programs. Over 500 persons with arthritis attended specially tailored programs — e.g., an aquatic exercise program, and a self-help course taught in Spanish for the Kansas City Hispanic population. Two regional centers established an arthritis information WATS line. Newsletters and television presentations have also been developed. Other Regional Arthritis Center activities include publication of several local arthritis newsletters. In the southwest region, this was distributed to 6,707 individuals, while *ARTHRITIS*WISE* has been sent to 7,400 persons in central Missouri.

Due to incomplete data about arthritis attitudes, knowledge and care-seeking behaviors, the MAAB elected to perform a statewide survey in early 1987. The goals were to facilitate RAC programmatic efforts, and focus statewide initiatives. There were 2,533 households contacted, with a minimum representation of 10 households in each of the 115 counties of Missouri. Randomized selection of telephone exchanges, numbers, and two calls per number, led to a 99% connection rate; the sampling error was ≤2%, the response rate was 68%, and the total survey required 1,550 man-hours.

Major findings included that: 1) arthritis is severe before patients seek care, 2) there are important misunderstandings regarding the causes of arthritis, and 3) the major media (television, TV advertisements, newspapers, and magazines) are reported to be the most effective mechanisms for effecting change in arthritis-related knowledge and attitudes, 4) the public has limited knowledge of specific arthritis diagnoses, even when they themselves are symptomatic, and 5) the general public is seriously misinformed regarding the nature and types of available effective treatments, and sources for optimal care.[22]

Conclusions

The Missouri Regional Arthritis Centers, through a multi-disciplinary approach, are demonstrating and stimulating the prompt and effective application of available knowledge, and developing new knowledge essential for the control of rheumatic diseases.

Now in their third year, the RACs offer public and patient education, outreach to underserved communities, and continuing medical education for arthritis and non-arthritis health specialists. The RACs provide a network of superior diagnostic, treatment and rehabilitation services closer to the home communities of all people with arthritis. Missouri has become a leader in the comprehensive provision of services to a large population of the chronically disabled. One can envision the export of this model, with our valuable and interrelated legislative, administrative and programmatic experiences, to many other states where arthritis is a major health care problem.

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Androgen Deficient Osteoporosis

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Osteoporosis, while relatively common in women, is a decidedly uncommon condition among men. A case report is presented, along with a review of the possible cause of osteoporosis in a man.

Osteoporosis is a generalized reduction in bone mass and is a major cause of morbidity and mortality in the elderly. It is the most common metabolic bone disease in women, occurring in one of four women in North America,[1] and is usually due to estrogen deficiency from menopause. Osteoporosis is much less common in men under the age of 75 and may be associated with a number of underlying diseases. We present a case of osteoporosis in a man secondary to hypogonadotrophic hypogonadism to illustrate the need to search for underlying causes of osteoporosis in men.

Case Report

A 63-year-old white man was admitted in January, 1985, for evaluation of a vertebral compression fracture. At the ages of 11 and 19, he had sustained traumatic fractures of the right forearm. Both fractures were slow to heal. In 1981, at age 59, he tripped, fell down two steps, and sustained fractures of his left leg and forearm, again with poor healing. His left leg was refractured in 1983 and an attempt was made at permanent pinning. Between 1983 and 1985, he developed multiple vertebral compression and rib fractures and in January, 1985, after another compression fracture, he was referred to the rheumatology service.

He had a history of mild hypertension treated with a low-salt diet. He had had a cerebrovascular accident in 1984 with mild residual right-sided weakness. This childless widower had smoked for 40 years, but denied excessive intake of alcohol. He had no history of diabetes or chronic lung disease. He had no history of glucocorticoid use and was taking no medication.

Physical examination revealed a tall, white man with eunuchoid body habitus and pectus carinatum. He had normal measurements of height (6′2″), arm span, and distance from floor to symphysis pubis. Chest hair was absent and pubic hair was scant with a female escutcheon pattern. Mild gynecomastia with small, widely spaced nipples was present. The testicles were bilaterally soft and small, measuring 2 cm in their greatest dimension. Musculoskeletal examination revealed a 5° flexion contracture of the right elbow, tenderness on palpation of the second through fourth lumbar vertebrae and instability in the left knee with marked bony hypertrophy. The left leg was 2 3/4″ shorter than the right leg. Visual fields and sense of smell were intact.

Hemoglobin was 13.9 gm/dL (12-18 gm/dL) and urinalysis was normal. The following serum chemistries were normal: blood urea nitrogen, creatinine, calcium, phosphorus and alkaline phosphatase. Urinary calcium was 252 mg/24 hr (100-250 mg/24 hr). Serum and urine protein electrophoreses were normal except for mild hypoalbuminemia. Serum thyroxine, thyroid stimulating hormone, AM serum cortisol, serum prolactin, and C-terminal parathyroid hormone levels were normal. Luteinizing hormone was normal at 6.2 milli-IU/mL (2-20 milli-IU/mL), but both follicular stimulating hormone and serum testosterone levels were undetectable. Karyotype was normal (46, XY).

Roentgenographic studies revealed diffuse osteopenia. Old rib fractures and vertebral compression fractures of the second through fourth lumbar bodies were present. There was pseudarthrosis formation with marked sclerosis and nonunion of bony frag-

Table 1

Causes of Osteopenia

Endocrine
- hypogonadism
  - estrogen deficiency
  - testosterone deficiency
- hyperparathyroidism
- hyperthyroidism
- diabetes
- hypopituitarism
- adrenocortical excess
- growth hormone excess (acromegaly)
- growth hormone deficiency

Genetic
- osteogenesis imperfecta tarda
- homocystinuria
- Marfan's syndrome
- Marquio's syndrome
- Werner's syndrome
- lactose deficiency
- adult hypophosphatasia

Bone Marrow Replacement
- multiple myeloma
- lymphoma
- leukemia
- mast cell disease
- Gaucher's disease

Drugs
- glucocorticoids
- ethanol
- heparin
- anticonvulsants
- methotrexate

Nutritional
- calcium deficiency
- phosphate deficiency
- phosphate excess (e.g., high soda intake)
- protein malnutrition
- ascorbic acid deficiency (scurvy)
- high protein diet
- vitamin D deficiency

Renal Disease
- chronic renal failure
- renal tubular acidosis
- renal hypercalciuria

Localized
- Sudeck's atrophy
- regional (migratory) osteolysis
- disuse

Miscellaneous
- senile osteoporosis
- rheumatoid arthritis
- chronic obstructive pulmonary disease
- immobilization
- metabolic acidosis
- postgastrectomy
- intestinal malabsorption

ments of the distal left femur.

Because the history, physical examination results and laboratory data were consistent with osteoporosis secondary to hypogonadotrophic hypogonadism, the patient was treated with replacement testosterone (300 mg intramuscularly every 3 weeks) and calcium and vitamin D supplements. The left knee was fitted with a brace for stability and a 2 1/2" lift obtained for the left shoe. He died one year after discharge. He had sustained no further fractures, and roentgenographic studies to follow the progress of his condition were not obtained.

Discussion

Osteoporosis is the parallel loss of mineral and matrix which may leave bone inadequate to withstand minor trauma. It usually presents as back pain, pathologic fractures of axial or appendicular skeleton, or as roentgenographic finding of osteopenia in asymptomatic patients. Postmenopausal women are at highest risk for developing osteoporosis. Diagnosis is usually made by roentgenograms, which are insensitive, becoming sensitive only after at least 30% to 50% of bone is lost. More sensitive, but also more expensive techniques have been utilized, including dual photon absorptiometry, total body neutron activation analysis and computed tomography.[2-3] Bone histomorphometry using tetracycline-labeled bone[4] may also be useful to differentiate osteoporosis from osteomalacia as well as to quantitate bone turnover.

The incidence of osteoporosis in men is much lower than in women. This is in part due to overall greater bone mass in men compared with women. In addition, average annual rate of loss of appendicular bone after age 40 is only 0.5% in men but 1% in women.[5] Vertebral bone loss is also less in men, with approximately 2% loss per decade compared with 7% loss per decade in women.[5] Thus, it is particularly important to search for underlying causes of osteoporosis in men, regardless of age.

A number of disorders may lead to osteopenia and/or osteoporosis (Table 1). These include endocrinopathies such as hypogonadism as in our patient, diabetes, hyperthyroidism, hyperparathyroidism and adrenal corticalism. Malignancies, particularly multiple myeloma, are another important cause of osteoporosis. Glucocorticoids are the most common cause of drug-induced osteoporosis, but chronic alcohol ingestion may also be an important and sometimes overlooked cause.[6] Other drugs implicated in the development of osteoporosis include heparin, anticonvulsants, and methotrexate. Renal disease and rheumatoid arthritis are also common disorders leading to osteoporosis. The investigation of causes of osteoporosis in men should therefore begin with a thorough history and physical examination followed by laboratory studies, including determinations of serum hemoglobin, creatinine, alkaline phosphatase, phosphorus, calcium, thyroxine, testosterone and parathyroid hormone as well as serum and 24-hour urinary calcium levels (Table 2).

This patient's history of early, frequent and poorly healing fractures was suggestive of longstanding osteoporosis. The presence of physical signs of hypogonadism suggested testosterone deficiency as the etiologic factor for the development of osteoporosis. This was confirmed by the undetectable levels of serum FSH and testosterone and by the normal results of the other screening studies.

Although hypogonadism is a well-recognized cause of osteoporosis, there have been few studies examining the incidence of osteoporosis in hypogonadal men. Smith and Walker[7] studied 29 patients with Klinefelter's syndrome and documented lower bone mineral content in all patients compared with normal controls. Bone density correlated with testosterone

Table 2

Studies in Osteopenia

Serum Chemistries
- calcium: total and ionized
- phosphorus
- alkaline phosphatase
- serum proteins
  - total, albumin, and electrophoresis
- renal function studies
  - urea nitrogen and creatinine
- electrolytes

Urinary Studies
- calcium
- hydroxyproline
- urinary cAMP
- urinary protein electrophoresis

Hormonal Studies
- parathyroid hormone
- calcitonin
- thyroxine
- cortisol
- growth hormone
- gonadotropins
  - FH and LSH
- estrogen
- testosterone
- 25-OH D_3 and $1,25\ (OH)_2D_3$

Radiologic Studies
- conventional skeletal x-rays
- photon absorptiometry
- neutron activation
- computer tomography

Miscellaneous Studies
- histomorphometry with tetracycline-labeled bone
- bone marrow biopsy for:
  - tumor cells, myeloma, mast cells, myeloproliferative disorders
- intestinal malabsorption studies

levels. Foresta et al[8] examined 18 hypogonadal patients, ten with Klinefelter's syndrome, six with hypogonadal hypogonadism, and two with hypogonadism secondary to traumatic castration. In all subjects with serum testosterone levels lower than 200 ng/100 mL, there was a significant loss of mineral content, again correlating with testosterone levels. One more recent study by Finkelstein et al[9] has observed 23 patients with hypogonadotrophic hypogonadism. Sixteen of these patients had cortical bone densities two standard deviations below normal, suggesting that the development of osteoporosis was due to testosterone deficiency rather than hyperprolactinemia or chromosomal aberration.

The effect of testosterone on bone is not well understood.[10] It may act directly on bone; in vitro studies show that bone can convert testosterone into dihydrotestosterone and increase the level of reductases. It may act indirectly, either via modulation of calcitonin secretion, as suggested by animal studies, or by peripheral conversion of androgens to estrogens. Thus testosterone deficiency would lead to a secondary estrogen deficiency, causing accelerated bone loss.

There is little evidence to suggest that correlation of the androgen deficiency will lead to reversal of the osteoporosis. Baran et al[5] reported one hypogonadal patient had a three-fold increase in total bone mineralization rate as measured by bone histomorphometry after six months of testosterone replacement. Greenspan et al[11] noted that six patients with hyperprolactinemic hypogonadism whose serum concentrations of prolactin, testosterone or both were normalized, had significant increases in forearm bone density, while another patient with persistent hyperprolactinemic hypogonadism had a decrease in bone density. These studies suggest that correction of the hypogonadal state may not only halt but also reverse the osteoporotic process. Our patient had no further fractures during one year of observation, but a change in bone density was not documented.

In conclusion, osteoporosis is an uncommon finding in men under the age of 75 and is usually associated with an underlying disorder. Hypogonadism is one of the important causes of osteoporosis in men. Treatment of the hypogonadism may not only halt but may also reverse the osteoporosis. Further studies are needed to clarify the incidence of osteoporosis in patients with androgen deficiency as well as the effect of testosterone replacement in these patients.

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Congenital Radial Aplasia

Results of 10 Cases and Review

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Columbia, Missouri

Congenital aplasia of the radius usually appears as an obvious deformity of the forearm at birth. Associated congenital abnormalities occur with sufficient frequency to warrant a search for further defects in affected infants.

Congenital absence of the radius is a defect resulting from deficiencies in development on the preaxial side of the limb. There is a spectrum of abnormalities resulting from failure of longitudinal development of the radius in the limb bud, ranging from hypoplasia to partial aplasia and total aplasia. There may be associated hypoplasia or aplasia of the thumb, carpal bones, or musculature of the radial side of the limb. The condition, which is bilateral in almost 50% of affected children, may manifest itself with a short floating thumb or with the classical radial club hand, including a short forearm with radial deviation of the hand at the wrist.[1-6] (Fig 1)

The anomaly occurs in approximately one of every 30,000 live births. It may be associated with other congenital disorders (Table 1). The anomalies may be genetically determined or occur as sporadic findings.[1, 2, 4]

Patients and Methods

Ten patients with congenital anomalies of the radius were studied at the University of Missouri-Columbia (UMC) Hospital and Clinics. In all cases the forearm anomalies were diagnosed at birth. There were no cases in which the radial defect was an isolated finding. Two of the 10 patients, both female, were diagnosed as having the TAR syndrome. One male patient had the VATER association. A female patient had the Holt-Oram Syndrome, while another female patient had Poland's syndrome (Tables 1 and 2).

With one exception, all the patients exhibited concomitant defects of the ulna. Four patients had congenital cardiac defects (Fig 3). Three had humeral anomalies, three had vertebral defects, and two had abnormalities of the sacrum. The radial deformity was left-sided in three cases and bilateral in the remaining patients. In addition, three of the 10 patients had family members with forearm anomalies, and two were infants of diabetic mothers.

Case Report

The patient was a boy who came to the UMC Hospital and Clinics at age 6½ years for recentralization of the carpus over the left ulna. He had been diagnosed at birth with bilateral absent radii, bilateral absent thumbs, bilateral camptodactyly of the second through fifth digits, bilateral fused carpal bones, and mild bowing of both ulnae. During the first six months of life, his radial anomalies were treated at another hospital with serial short arm casts in an effort to reduce the carpal bones over the distal ulnae. Subsequently, he was hospitalized for release of radial structures and centralization of the left wrist over the ulna with fixation. The same procedure was performed on the right forearm two weeks later. When

Table 1[1, 2, 12]

Syndrome	*Congenital Defect*	*Inheritance*
Holt-Oram	Radial aplasia; proximal radioulnar synostosis; thumb hypoplasia or aplasia; proximal humeral defect. Congenital cardiac defects.	Autosomal dominant
Nager (acrofacial dysostosis)	Radial and thumb hypoplasia or absence; radioulnar synostosis; triphalangeal thumbs. Hypoplastic mandible; antimongoloid slant of palpebral fissures; small auricles; narrow external auditory canals; conductive deafness.	Autosomal dominant
Ladd (lacrimoauriculo dentodigital syndrome)	Radial defects; thumb triphalangy or duplication; clinodactyly; syndactyly. Cupped external ears; lacrimal duct stenosis; dental anomalies.	Unknown
Fanconi's	Radial and thumb hypoplasia or aplasia; thumb duplication. Diffuse brown pigmentation or vitiligo. Microphthalmos; strabismus; deafness. Anemia; polymorpholeukocyte and thrombocyte deficiencies; generalized poor growth; cardiac and renal defects.	Unknown
Thrombocytopenia and radial aplasia (TAR)	Radial aplasia; humeral and ulnar absence or hypoplasia; small finger mesobrachyphalangy and clinodactyly; tibial torsion with genu varum. Tetralogy of Fallot. Narrow external auditory canals.	Autosomal recessive?
Craniosynostosis with radial aplasia	Radial hypoplasia and aplasia; thumb hypoplasia. Craniosynostosis. Short stature.	Autosomal recessive
VATER Association	*V*ertebral anomalies *V*entricular septal defects and other cardiac defects *A*nal atresia; *A*trial septal defect *T-E* fistula with esophageal atresia *R*adial dysplasia *R*enal anomaly	Unknown
Poland	Breast anomalies. Upper limb anomalies, usually thumb. Other skeletal, heart and renal anomalies.	Unknown

*Table Modified after Boar, F W. *Pediatric Upper Extremity Diagnosis and Management.*

he was admitted to our hospital for recentralization of the left carpus, screening for features of the Fanconi and TAR syndromes was negative. He had no history of hematological or cardiac problems. His developmental history, available to age 7½ years, was normal. However, the patient's mother had had diabetes mellitus Type I for 18 years when her son was born, and she also had absent distal interphalangeal creases on the fourth fingers bilaterally. It was noted that the patient's maternal grandmother and great-grandmother had the same finger anomalies as the patient's mother.

Discussion

Etiology and Embryology

In some cases of radial anomaly, a genetic basis has been demonstrated, often in association with inheritable syndromes. Embryologic events suggest that all of these basic defects may be related to chromosome 18, as many of the malformations described are associated with trisomy 18. These defects have also been shown to occur as a result of maternal thalidomide ingestion.[2, 4, 6] Regardless of the possible cause, the limb defects occur during the early embryonic

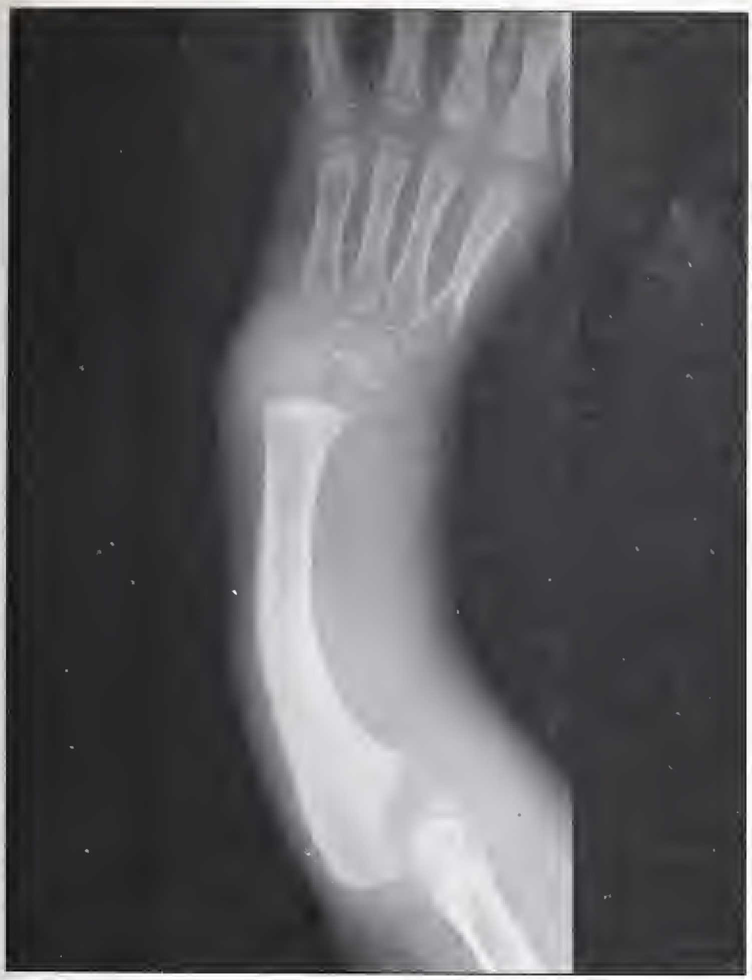

Fig 1. Total aplasia of all radial skeletal components including the carpus and thumb. The ulna is foreshortened and curved.

phase of differentiation. Normally, the limb buds appear at four weeks' gestation. Differentiation within the limb bud occurs in the following three weeks, proceeding from proximal to distal structures. Any disruption in the process will result in a limb defect.

Radial aplasia is a deficiency that results from the arrest of radial longitudinal development secondary to damage to the apical ectoderm of the limb bud at various times in the differentiation process.[3-5] Depending on the type of damage, the result may be any combination of hypoplasia or aplasia of the radius, thumb, carpus or metacarpals, as well as abnormalities of the musculature, nerves and joints on the preaxial side of the limb.[3, 4] Other proposed causes of developmental arrest include maternal infections, vascular compromise and maternal diabetes.[4, 7, 9-11]

Radiologic Findings

Typically, the radiologic findings are focused on the skeletal system. However, there are often defects of associated muscles, nerves and joints which will not be readily apparent on radiography.[1-4] As the degree of the defect is determined by the timing of the developmental arrest, there is a wide range of radiologic findings, from simple displacement of the thumb (Fig 2), or hypoplasia of the radius or thumb (Fig 4), to partial aplasia (Fig 5) or complete absence of the radius and preaxial carpals and digits (Fig 1). In some instances, the radius may be absent but the thumb is present (Fig 3).

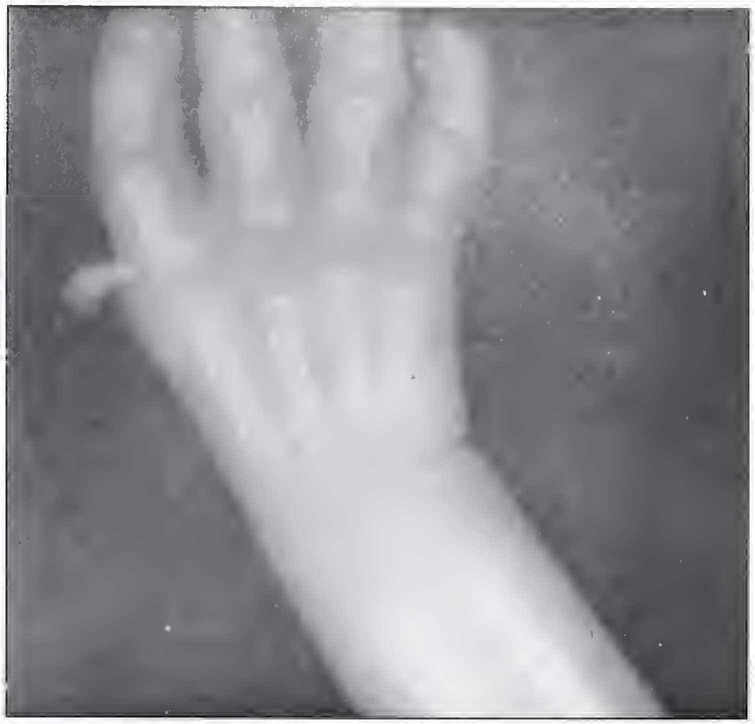

Fig 2. Severe hypoplasia of the thumb and its associated metacarpal.

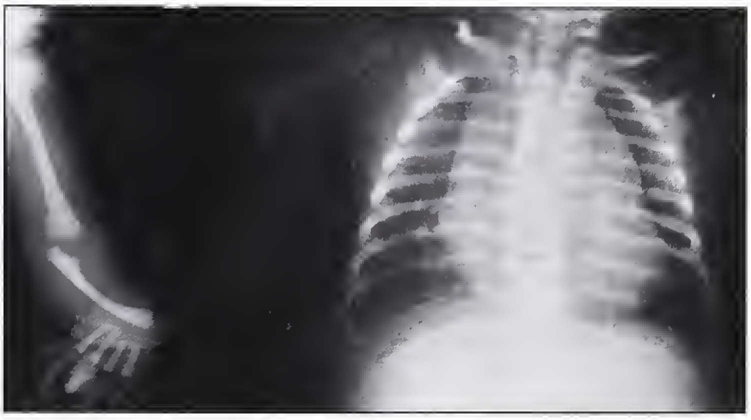

Fig 3A (left). Total aplasia of the radius with slight bowing of the ulna and hypoplasia of the thumb. **Fig 3B.** The heart is enlarged and there is an increase in the pulmonary vascular markings.

In many instances there is a correlation between the type of deformity and an associated hematological disturbance. In general, absence of the thumb and radius is associated with aplastic anemia. If the thumb is present and the radius absent, the association is with thrombocytopenia. Many cases also show some degree of ulnar bowing, which only appears some time after birth due to soft tissue contractures.[3-5] There may be other associated skeletal findings involving the humerus, sacrum, vertebrae, and lower extremities.[2, 4, 6, 11]

Clinical Findings

Generally, some abnormality of the forearm and hand will be noted at birth. The range of clinical features is dependent, in part, on any associated anomalies or syndromes. The forearm anomaly may be unilateral or bilateral and may be asymmetric. Associated abnormalities of preaxial muscles, nerves and joints

Table 2

Case	Sex/ Birth Weight	Radial Anomaly	Associated Findings	Family History
1	M/3800 gm	bilateral	Absent thumbs bilaterally (Fig 1) Camptodactyly of 2nd-5th digits bilaterally Fused carpal bones bilaterally INFANT OF DIABETIC MOTHER	Limited flexion of all digits with absent interphalangeal creases of 4th digits bilaterally in mother, maternal grandmother and great grandmother Hearing loss — lower tones in mother, maternal grandfather, and great grandfather Maternal infections during pregnancy
2	M/2690 gm	bilateral	Absent thumbs bilaterally Clinodactyly 2nd digit bilaterally Cutaneous and proximal osseous syndactyly of 4th and 5th metacarpals bilaterally Shortened right humerus Severe sensorineural hearing loss on right at 4 years of age; slight loss on left Chromosomal analysis normal PROBABLE FANCONI'S	Shortened left arm with 2 fingers and right arm with 3 fingers in 6th degree relative of proband
3	M/2830 gm	left	Double outlet right ventricle with multiple VSDs (Fig 3b) Hypoplastic sacrum; T-4 left hemivertebra Left thumb proximally placed and pedunculated Hypoplasia left 1st metacarpal (Fig 3a) Clinodactyly of 2nd to 5th digits on left	Maternal uncle died at 8 months of age due to congenital heart disease Maternal uncle died at age 12 hours
4	F/3000 gm	left	Absent 1st metacarpal and phalanges on left Absent segmentation of middle digits on left Camptodactyly of 3rd and 4th digits on left Cutaneous syndactyly of 3rd and 4th digits on right Absolute eosinophilia	— — — —
5	F/2380 gm	bilateral	Hypoplastic clavicles, scapulae, left humerus and ulna Proximally placed thumbs bilaterally Camptodactyly of 3rd and 4th digits bilaterally Clinodactyly of 5th digits bilaterally Thrombocytopenia TAR SYNDROME	— — — —
6	M/4260 gm	bilateral	Bowed dysplastic ulna Hypoplastic 1st digit bilaterally Hypersegmentation anomalies of some sacral elements Posterior wall ischemia of heart Imperforate anus with fistula to scrotum Proximally placed thumbs with contraction deformities of fingers VATER ASSOCIATION	Infant of diabetic mother (gestational)
7	F/3360 gm	bilateral	Aplastic right humerus Hypoplastic left humerus Absent right patella Remnant left patella Severe thrombocytopenia Spina bifida occulta of cervical and thoracic spines without neurologic defects	Normal pregnancy Biological father was drug abuser One sibling died shortly after birth from unknown cause Maternal uncles exhibited absent thumbs, absent fingers Two half-sibs — normal

Table 2 (*Continued*)

Case	*Sex/ Birth Weight*	*Radial Anomaly*	*Associated Findings*	*Family History*
7	F/3360 gm	bilateral	Calcaneal valgus feet bilaterally External rotation defects of knees bilaterally Chromosomal studies — normal TAR SYNDROME	
8	F/2500 gm	left	Absent left thumb Left wrist eversion Fracture of distal left radius Scoliosis diagnosed at age 3½ years Tracheomalacia Absent metacarpal and phalangeal bones left 1st digit Retarded ossification of distal radial epiphysis on left Left ulnar hypoplasia Right ventricular hypertrophy	Normal male sibling
9	F/2550 gm	bilateral	Left forearm had 3 digits Right forearm had 4 digits Bilateral radial club hands Incomplete shoulder development Patent ductus arteriosus and ASD Normal mental development HOLT-ORAM SYNDROME	Father was drug abuser during time of patient's conception
10	F/1690 gm	bilateral	Absent right thumb Hypoplastic left 1st metacarpal Bilateral radial head dislocations Bowed radii bilaterally Right clinodactyly Cleft palate Hydrocephalus Proximally placed left thumb Micrognathia Flexion contractures of elbows bilaterally PDA and VSD Absent breast Seizure disorder Chromosomal analysis — normal POLAND'S SYNDROME ANOMALY	Patient is second twin of breech delivery The first twin is normal

will result in contractures, weakness or limitation of motion within the limb.[1, 3-5] Since radial anomalies occur commonly in association with other congenital defects or as part of a more generalized congenital disorder, infants with radial anomalies deserve a thorough search for other abnormalities, especially cardiac and chromosomal defects and blood dyscrasias.[2, 6, 8] (Fig 3A and B)

Indications for Treatment

Indications for treatment are based on the potential function of the affected limb, as well as aesthetic considerations. Ideally, the child should be under age 5 years for optimal surgical results. By 10 years of age, most patients have adapted to their deformity. Muscle, nerve or joint deformities should be determined, as they may preclude some surgical treatments. For example, where there is abnormal elbow function and the forearm becomes "locked" in the extended position, the hand can touch the face and the body more easily while in the radially deviated position. Thus, surgical centralization would not be indicated.[1, 4]

Treatment

Treatment procedures differ depending on the severity of the deformity; however, all therapies are designed to improve mobility, strength, and stability of the forearm and wrist, and to improve dexterity of the hand and fingers. Generally, with hypoplasia of the radius and radial deviation of the hand, serial stretching casts are used initially to stretch the soft tissues and straighten the hand centrally over the forearm. If indicated, surgical release of the tight soft tissue structures may improve function, and tendon transfers can be used to stabilize the wrist and help keep the hand straight.[1]

There are differing opinions as to whether surgery should be done at all. In those cases in which surgical correction is advisable, the best treatment

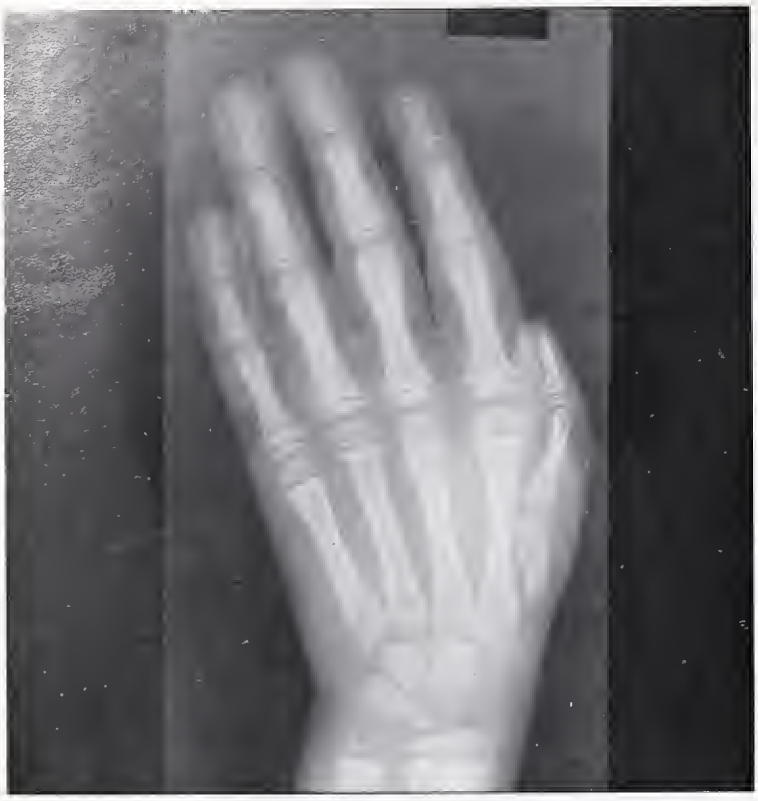

Fig 4. Hypoplasia of the thumb with absence of the proximal half of the first metacarpal and associated carpal bones. The distal radial epiphysis is somewhat reduced in size.

seems to be centralization of the carpus over the ulna. Tendon transfers are indicated in cases of recurrence. Other procedures such as bone grafts from the fibula, arthrodesis of the wrist, and osteotomy of the ulna alone have not proved to be successful. The centralization procedure should be performed prior to the age of 1 year. Where the ulna is bowed, osteotomy should be performed either prior to, concomitantly, or after the centralization surgery. Additional procedures may be necessary if joint abnormalities or contractures are present. It should also be noted that although untreated patients adapt to their deformity, they are more limited in their movement than the treated patients.[1, 4]

In our series, five patients underwent surgical procedures. Three of these had recentralization procedures, one had pollicization alone, and another had localized reconstructive hand surgery. In all patients, limb function appeared to have improved to varying degrees.

Conclusion

Radial aplasia is comprised of a large spectrum of deformities resulting from radial longitudinal developmental arrest. The abnormalities are usually apparent at birth and are often associated with other congenital anomalies and syndromes. The defect occurs on the preaxial side of the forearm, may be unilateral or bilateral, and may be genetically determined. Although there is no consensus on the advisability of surgical treatment of complete radial aplasia, when indicated centralization of the carpus over the distal ulna is the recommended procedure.[1, 2, 4, 6] All patients with forearm anomalies should receive a thorough examination for other congenital anomalies, especially cardiac, chromosomal, and blood abnormalities.

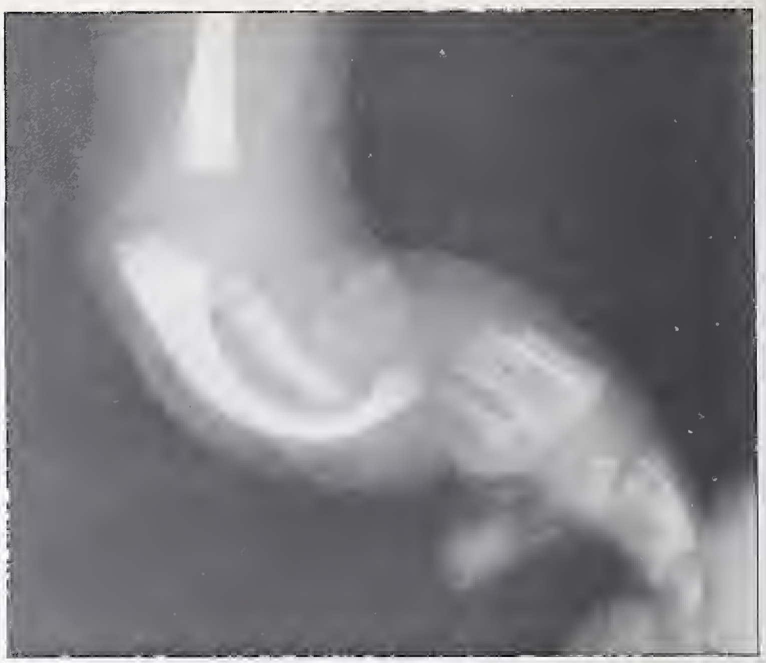

Fig 5. Partial aplasia of the radius with considerable bowing of the ulna.

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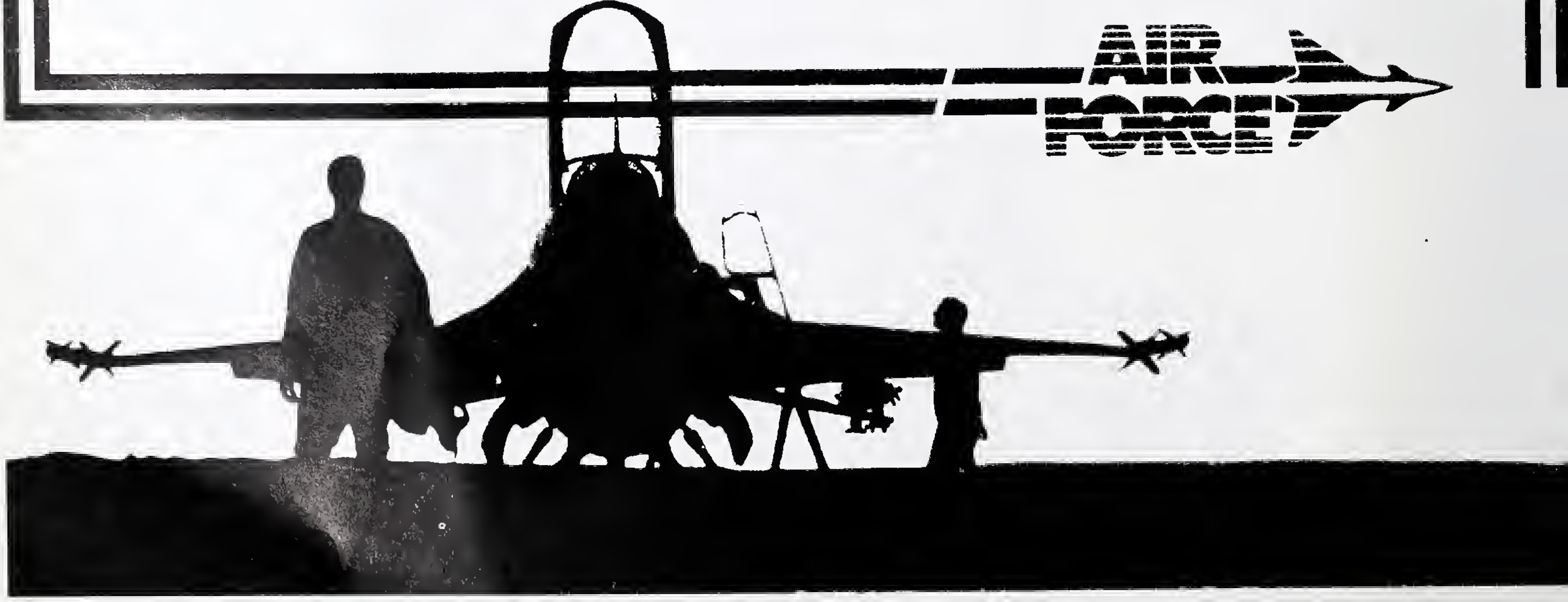

New Members

■ **Lyndon U. Anthony, M.D.,** 1325 S. Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Anthony received his preliminary education at the University of North Carolina and obtained his medical degree at the University of North Carolina in 1957. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Anthony specializes in neurosurgery.

■ **Phillip G. Apprill, M.D.,** 6400 Clayton, Suite 212, St. Louis 63139, has become a member of the St. Louis Metropolitan Medical Society. Dr. Apprill received his preliminary education at St. Louis University and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1980. He completed his residency at the University of Texas-Southwestern Hospitals, Dallas, TX. Dr. Apprill specializes in internal medicine.

■ **Eleanor M. Bedwell, M.D.,** 3900 S. Grand Blvd., St. Louis 63118, has become a member of the St. Louis Metropolitan Medical Society. Dr. Bedwell received her preliminary education at the University of Missouri-Columbia and obtained her medical degree from the University of Missouri-Columbia School of Medicine in 1983. She completed her residency at Bexar County Hospital District, San Antonio, TX. Dr. Bedwell specializes in pediatrics.

■ **James H. Boyd, M.D.,** One Hospital Drive, University of Missouri-Columbia Hospital and Clinics, Dept. of Surgery, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Boyd received his preliminary education at Southwest Missouri State University and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1985. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Boyd specializes in otolaryngology.

■ **Lucinda S. Buescher, M.D.,** One Hospital Drive, University of Missouri-Columbia Hospital and Clinics, Dept. of Dermatology, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Buescher received her preliminary education at the University of Missouri-Columbia and obtained her medical degree at the University of Missouri-Columbia School of Medicine in 1987. She is completing a residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Buescher specializes in dermatology.

■ **Jeffrey G. Copeland, M.D.,** 119 First Capitol Drive, St. Charles 63301, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Copeland received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1979. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Copeland specializes in plastic and reconstructive surgery.

■ **Remedios R. Crespo, M.D.,** 213 E. Booneslick Road, Warrenton 63383, has become a member of the Franklin-Gasconade-Warren County Medical Society. Dr. Crespo received his preliminary education at the University of Santo Tomas-Philippines and obtained his medical degree at the University of Santo Tomas in 1954. He completed his residency at St. Anthony's Hospital, St. Louis, MO. Dr. Crespo specializes in family practice.

■ **Daniel C. Cummings, M.D.,** Route 1, Box 55, Sigler Street, Memphis 63555, has become a member of the Northeast Missouri County Medical Society. Dr. Cummings received his preliminary education at the University of Utah and obtained his medical degree at the University of Utah in 1975. He completed his residency at Washington Adventist Hospital. Dr. Cummings specializes in family practice.

■ **Philip D. Dean, M.D.,** 800 East 5th St., Suite 112, Washington 63090, has become a member of the Franklin-Gasconade-Warren County Medical Society. Dr. Dean received his preliminary education at North Carolina State University and obtained his medical degree at the Chicago Medical School in 1983. He completed his residency at the University of Kansas College of Health Sciences Hospital, Kansas City, KS. Dr. Dean specializes in neurology.

■ **Robert D. Johnson, M.D.,** 1965 S. Fremont, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Johnson received his preliminary education at Tulane University and obtained his medical degree at the University of Texas-San Antonio in 1973. He completed his residency at the University of Texas Teaching Hospitals, San Antonio, TX. Dr. Johnson specializes in urology.

■ **M. Emin Kiyanclar, M.D.,** 660 S. Euclid, Washington University, Dept. of Anesthesiology, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Kiyanclar received his preliminary education at Ain Shams University, Egypt and obtained his medical degree at the Ain Shams University School of Medicine in 1969. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Kiyanclar specializes in anesthesiology.

■ **Allen P. Klippal, M.D.,** 1065 Executive Parkway, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Klippal received his preliminary education at Amherst College and obtained his medical degree at St. Louis University in 1946. He completed his residency at St. Luke's Hospital, St. Louis, MO. Dr. Klippal specializes in surgery.

■ **Bruce A. Kraemer, M.D.,** 4949 Barnes Hospital Plaza, Suite 17424, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Kraemer received his preliminary education at the University of Tulsa and obtained his medical degree at Washington University School of Medicine in 1979. He completed his residency at the University of Texas, Houston, TX. Dr. Kraemer specializes in plastic surgery.

■ **William D. Ludwig, M.D.,** 1443 N. Robberson, Suite 208, Springfield 65802, has become a member of the Greene County Medical Society. Dr. Ludwig received his preliminary education at Creighton University and obtained his medical degree at Creighton University in 1982. He completed his residency at the University of Minnesota, Minneapolis, MN. Dr. Ludwig specializes in radiology.

■ **James M. Lynch, M.D.,** 5535 Delmar Blvd., St. Luke's Hospital, St. Louis 63112, has become a member of the St. Louis Metropolitan Medical Society. Dr. Lynch received his preliminary education at the University of Florida and obtained his medical degree at the University of Santiago, Dominican Republic in 1984. He completed his residency at St. Luke's Hospital, St. Louis, MO. Dr. Lynch specializes in internal medicine.

■ **David L. McCollister, M.D.,** 200 Medical Plaza, Lake St. Louis 63367, has become a member of the St. Charles-Lincoln County Medical Society. Dr. McCollister received his preliminary education at William Jewell College and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1981. He completed his residency at Mount Sinai Medical Center, Cleveland, Ohio. Dr. McCollister specializes in general surgery.

■ **Lottie B. McWherter, M.D.,** 1000 Argyle Bldg., 306 E. 12th Street, Kansas City 64141, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. McWherter received her preliminary education at Kansas State Teacher's College and obtained her medical degree at the University of Kansas in 1957. She completed her residency at Charity Hospital, New Orleans, LA. Dr. McWherter specializes in internal medicine.

■ **J. Peter Murphy, Jr., M.D.,** 3015 N. Ballas Road, St. Louis 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Murphy received his preliminary education at Yale University and obtained his medical degree at George Washington University in 1976. He completed his residency at the National Naval Medical Center, Bethesda, MD. Dr. Murphy specializes in cardiothoracic and vascular surgery.

■ **Robert M. Orr, M.D.,** One Hospital Drive, University of Missouri Hospital and Clinics, Dept. of Anesthesiology, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Orr received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1983. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Orr specializes in anesthesiology.

■ **Romulo G. Perez, M.D.,** Tower Plaza, Clinic Road, Hannibal 63401, has become a member of the Marion County Medical Society. Dr. Perez received his preliminary education at the University of Santo Tomas, Manila, Philippines and obtained his medical degree at the University of Santo Tomas in 1962. He completed his residency at St. Louis County Hospital, St. Louis, MO. Dr. Perez specializes in obstetrics/gynecology.

■ **Jack L. Schafer, M.D.,** 20 Hughes Ford Road, Sullivan 63080, has become a member of the Franklin-Gasconade-Warren County Medical Society. Dr. Schafer received his preliminary education at the University of Michigan and obtained his medical degree at St. Georges University School of Medicine in 1983. He completed his residency at Deaconess Hospital, St. Louis, MO. Dr. Schafer specializes in internal medicine.

■ **Zareh H. Vartivarian, M.D.,** 10010 Kennerly Road, St. Anthony's Medical Center, St. Louis 63128, has become a member of the St. Louis Metropolitan Medical Society. Dr. Vartivarian received his preliminary education at the American University of Beirut and obtained his medical degree at the American University of Beirut School of Medicine in 1979. He completed his residency at St. Louis University Hospital, St. Louis, MO. Dr. Vartivarian specializes in plastic surgery.

■ **James P. Webb, M.D.,** 1900 S. National, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Webb received his preliminary education at Arkansas State University and obtained his medical degree at the University of Arkansas for Medical Sciences in 1982. He completed his residency at the University of Kansas, Kansas City, KS. Dr. Webb specializes in urology.

■ **William P. Wright, M.D.,** One Hospital Drive, University of Missouri Hospital and Clinics, Dept. of Internal Medicine, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Wright received his preliminary education at Duke University and obtained his medical degree at the University of Missouri-Columbia in 1985. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Wright specializes in internal medicine.

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Medical School News

St. Louis University

■ **Maurice Green, Ph.D.,** chairman of the Institute for Molecular Virology at St. Louis University Medical Center, has been awarded a two-year, $160,000 grant from the American Cancer Society. He will use the grant to continue his research on the role of human papillomaviruses in human cervical cancer.

Worldwide studies have shown that sexually transmitted diseases caused by human papillomaviruses have reached epidemic proportions. Strong evidence links specific types of human papillomaviruses with several types of urogenital cancer, especially cervical cancer.

Dr. Green and his colleagues will research the relationship of these viruses to cancer by establishing a natural human model to study the molecular mechanism of cancer formation. Dr. Green anticipates that the research will lead to an understanding of the role of viral genes and cellular and environmental factors in the cause of cervical cancer. Such basic information is vital to the development of a prevention or cure for the disease.

Paul M. Loewenstein, research associate in the Institute for Molecular Virology, and **Allan J. Jacobs, M.D.,** director of the division of gynecologic oncology in the Department of Obstetrics and Gynecology at St. Louis University Medical Center, will assist Dr. Green in his research.

■ **William H. Elliott,** professor of biochemistry at St. Louis University School of Medicine, has been awarded a $236,000 grant from the Division of Research Resources, National Institutes of Health to purchase a new gas chromatograph-mass spectrometer.

The instrument will be used to identify very small amounts of organic compounds that are too small to be seen by the human eye. It will be used for on-going research projects, including studies on the metabolism of cholesterol and related materials, adult respiratory failure, cancer of the kidney, and other projects.

The new instrument also will inaugurate the establishment of a new Mass Spectrometry Center at the medical school. It will augment the capabilities of an existing Swedish gas chromatograph-mass spectrometer, the first such instrument to be installed in a medical school in the United States.

■ **Carmine J. Coscia, Ph.D.,** professor of biochemistry at St. Louis University School of Medicine, has been awarded a three-year, $209,533 grant from the National Institute on Drug Abuse. He will use the grant to continue his research on the post-natal development of opioid receptors in the brain.

Dr. Coscia will research how the receptors mediate physiological processes. Ultimately, his research will lead to better understanding the mechanisms of drug dependence and tolerance at a molecular level. Such research also will provide insight into the effects of the opioid drugs on a fetus whose mother consumes the drugs.

■ **Allyn C. Howlett, Ph.D.,** associate professor of pharmacology at St. Louis University School of Medicine, has been awarded a three-year, $238,238 grant from the National Institute on Drug Abuse. She will use the grant to continue her research on the function of Delta 9-THC, the main psychoactive compound in marijuana.

This chemical compound in marijuana affects the brain by acting as an analgesic, reducing anxiety, and functioning to suppress nausea and vomiting for chemotherapy patients. It also creates a psychological high that is pleasing to recreational users.

Dr. Howlett will research neurons in rats' brains to distinguish possible differences between neurons having receptors that create a psychological high from the neurons associated with pain relief. Her research will lead toward distinguishing potential analgesic drugs that kill pain much in the same manner as marijuana, but without creating a psychological high. Her research also may help to explain the brain mechanisms involved with memory, perception, and other brain functions that are altered because of marijuana use.

■ **John D. Bouhasin, M.D.,** clinical professor of pediatrics at St. Louis University School of Medicine, has been awarded a $25,000 grant from the Bi-State Hemophilia Association. The grant will be used to supplement the salary of a nurse specialist, who will coordinate the AIDS clinic and care for hemophilia patients at the Missouri-Illinois Regional Comprehensive Hemophilia Diagnostic and Care Center.

The grant also will be used to supplement insurance costs for the use of AZT, a drug used to treat AIDS patients.

Dr. Bouhasin, who also is co-director of the hemophilia center, established the center in 1962. Based at Cardinal Glennon Children's Hospital and St. Louis University Medical Center, the treatment center is one of the largest of its type nationwide.

The University of Missouri-Columbia

■ **Allan Jones, Ph.D.,** professor and chairman of the department of physiology, has been appointed as the first **James O. Davis Distinguished Professor.** Dr. Jones, well-recognized for his research into high blood pressure, was also honored last year with a prestigious MERIT award from the National Institutes of Health for his study of hypertension at the cellular level.

The new professorship is designed to help support the School of Medicine's long-term commitment to cardiac research. Three private estate gifts to the School of Medicine totaling almost a quarter of a million dollars are providing the endowment for the James O. Davis Distinguished Professorship in Cardiovascular Research.

James O. Davis, Ph.D., M.D., professor emeritus of physiology and former chairman of the physiology department, is internationally recognized for his distinguished contributions to the understanding of high blood pressure and congestive heart failure. He is an elected member of the National Academy of Sciences, one of the highest honors that can be accorded an American scientist. Dr. Davis also is a founding member of the International Society of Hypertension and a former president of that organization.

- **Khanna Ramesh, M.D.,** associate professor of medicine, recently presented "Evolution of Peritoneal Dialysis Catheter" at the Angio- and Peritoneal Access in Uremia Conference in Billingehus Conference Center, Skovde, Sweden.

- **Susan Krechel, M.D.,** associate professor of anesthesiology, recently served as a visiting professor of anesthesiology in New Zealand. During her stay, she spoke at various centers throughout the country about neonatal anesthesia and she addressed the Annual Conference of Anesthesiologists of New Zealand on the topic of geriatric anesthesia. Dr. Krechel also recently spoke to the Columbian Congress of Anesthesiology and Reanimation in Cartagena, Columbia, about several aspects of geriatric anesthesia.

- **Robert McCallum, Ph.D.,** associate professor of psychiatry, has been appointed Assistant Dean for Student Affairs.

- **Mark McIntosh, Ph.D.,** associate professor of microbiology, **Kim Wise, Ph.D.,** associate professor of microbiology, and **Mark Nahlik, Ph.D.,** postdoctoral fellow, presented a three-week course of "Mycoplasma Gene Technology" last summer at the University of Bordeaux II in France.

- **Vaskar Mukerji, M.D.,** assistant professor of medicine, has been selected as a Willard Thompson Scholar of the American College of Physicians for 1988-89.

- **Frank O'Sullivan, M.D.,** assistant professor of medicine, has been awarded $40,000 for the Career Development Research Award for his research on Spontaneous Autoimmune Arthritis: Effects of Immunologic Modulation.

- **Maria Thomas, M.D.,** clinical assistant professor of psychiatry, has been appointed as a consultant to the Federal University of Alagoas in Maceio, Brazil, to develop a curriculum in child psychiatry for medical students, residents and psychologists. She is also serving as a consultant to the Secretary of Education of the State of Alagoas regarding the role of counselors in identifying children with problems.

- **James Weiss, M.D.,** professor and chairman of psychiatry, recently presented two invited papers and a poster exhibition on "Transcultural Factors in Psychopathy" at a meeting of The Royal College of Psychiatrists in London. Dr. Weiss is Liaison Officer to The Royal College for the American College of Psychiatrists.

- **Anne Winkler, M.D.,** has been awarded a $20,000 Arthritis Foundation Post-doctoral fellowship which will support her research of the Antigens Recognized by Sm and RNP-like Antibodies.

- Plans for Mid-Missouri's first licensed adult day care center are closer to completion thanks to a $10,000 pledge from a trust fund established by a group of Columbia residents. The Eldercare Center, sponsored by the School of Health Related Professions, will be located in Clark Hall on the University campus. Renovation of the former dormitory's lobby area is scheduled to begin in February and the center is expected to be completed in May 1988. Future Eldercare Director **Lois Long, M.S.,** assistant professor of health related professions, says further community support will be essential to get the center operating. The new center will be designed to provide health and social services in a protective setting for those frail or impaired adults who cannot be left alone, yet can and want to live in their own homes.

University of Missouri-Kansas City

- **Dean James J. Mongan, M.D.,** who also is executive director of Truman Medical Center, recently assumed two national posts. In addition to beginning his term as a board member of the Association of American Medical College's (AAMC's) Council on Teaching Hospitals, he was elected to the Board of Trustees of the American Hospital Association (AHA). This top AHA board, which has major policymaking and governance authority for the organization, is composed of 25 healthcare executive and hospital leaders from across the country. The AHA, a national not-for-profit organization, serves as an advocate for hospitals nationwide.

- Effective Jan. 1, **Marjorie Sirridge, M.D.,** professor, assistant dean and chairman, Council on Curriculum, became president-elect of the Metropolitan Medical Society of Greater Kansas City (Metromed). Although Dr. Sirridge's term as president-elect lasts for one year, her election to this post actually kicks off a three-year commitment to the organization: next year she will assume the presidency, and in 1990, she will serve as past president for one year. Metromed consists of approximately 1,500 physician members in the five-county area of Clay, Platte, Jackson, Johnson, and Wyandotte.

- **Alan Lichtin, M.D.,** docent and assistant professor of Medicine, recently was awarded two grants. Through a grant which provides salary support and start-up funds from the state of Missouri, he is involved in establishing a sickle-cell center at Truman Medical Center in cooperation with the Kansas City, MO, Health Department. Also collaborating on the project is **Mark Mitchell, M.D., M.P.H.** A second grant, which involves funds from the National Institutes of Health, involves establishing a Hemophilia Treatment Center at TMC and The Children's Mercy Hospital. The center provides multi-disciplinary care through comprehensive clinical evaluation. Co-directors for the project are Dr. Lichtin and **Gerald Woods, M.D.** Also involved in the project are clinical nurse specialist **Tamis Rogers, R.N., B.S.N.,** and social worker **Ann Johnson, M.S.W.**

- Two TMC executives recently assumed national appointments. **Daniel M. Couch,** deputy executive director/administrator of Truman Medical Center, has been named chairman-elect of the National Association of Public Hospitals (NAPH). He will become chairman of the national association on Jan. 1, 1989, the top post of a 10-member executive committee and 70-member board of directors. The NAPH represents 80 large urban public hospitals across the United States. **Clifford G. Browne Jr.,** chief administrator of Truman Medical Center-East, has been elected to the American Hospital Association's Governing Council, Section of Aging and Long-Term Care Services. The appointment represents the second national honor awarded Mr. Browne this year. This summer, he advanced to Fellowship status with the American College of Healthcare Executives, the highest professional designation a health-care executive can achieve.

- Truman Medical Center-East recently hosted an open house to celebrate the expansion of the Bess Truman Family Practice Center. The

$75,000 project was undertaken to attract an expanded patient base. The facility features a 1,500-square-foot remodeled area which includes examination rooms, a reception area, waiting room, laboratory, and nurse's station.

▪ **Paul A. Williams, M.D.**, professor of Community Medicine and Family Practice at Truman Medical Center-East, has been appointed to the editorial review panel of *Postgraduate Medicine* magazine, a publication of McGraw-Hill Health Care Group. Dr. Williams also is vice chairman and residency program director of the Bess Truman Family Practice Center at TMC-East.

▪ Three students and one alumni recently were named Oustanding Young Men of America (OYMA). **Mark Griffin, Jeff Kerby, Paul "Chip" Zachary,** and **D. Skip Sallee, M.D.,** a 1985 graduate, received this honor. Their biographies will appear in the annual awards publication *Outstanding Young Men in America*. The OYMA program is designed to honor and encourage exceptional young men between the ages of 21 and 36 who have distinguished themselves in many fields of endeavor.

■ **Mr. Russell G. Jones Jr.**, was honored at a Dec. 11 farewell reception. As an administrator at both TMC and the School of Medicine for the past decade, he was recognized for his key contributions to Hospital Hill and its institutions and for his ability to deal with people in a pleasant, effective manner. Most recently, Mr. Jones was director of Administration at the Medical School, associate executive director of TMC, and director of TMC's Charitable Foundation.

■ The Medical School has had several noteworthy speakers of late. Among them were **John Stoeckle, M.D.,** of Harvard University. Dr. Stoeckle, who spoke on "The Medical Interview" was the school's first annual **William Goodson, M.D.** Lecturer. In memory of Mr. Goodson, a prominent Kansas City internist, the Medical School, Trinity Lutheran Hospital, and his family joined forces to establish this special lectureship. Also making a Grand Rounds presentation, on "AIDS and Chemical Dependency," was a UMKC graduate who has distinguished himself in several areas. **Daniel Flavin, M.D.,** Class of '79, a former Mayo Clinic Scholar, currently is chief of the outpatient alcoholism program, and coordinator of continuing medical education for the Department of Psychiatry at St. Vincent's Hospital and Medical Center in New York City. In addition, he is medical scientific officer of the National Council on Alcoholism. And **Professor Charles Stegeman** made his second visit to UMKC to speak on "Art in Medicine: A Visual Perspective." In addition to speaking at the Medical School, he was a Jo Tyler lecturer for UMKC. He is professor and chairman of Fine Arts at Haverford College in Pennsylvania.

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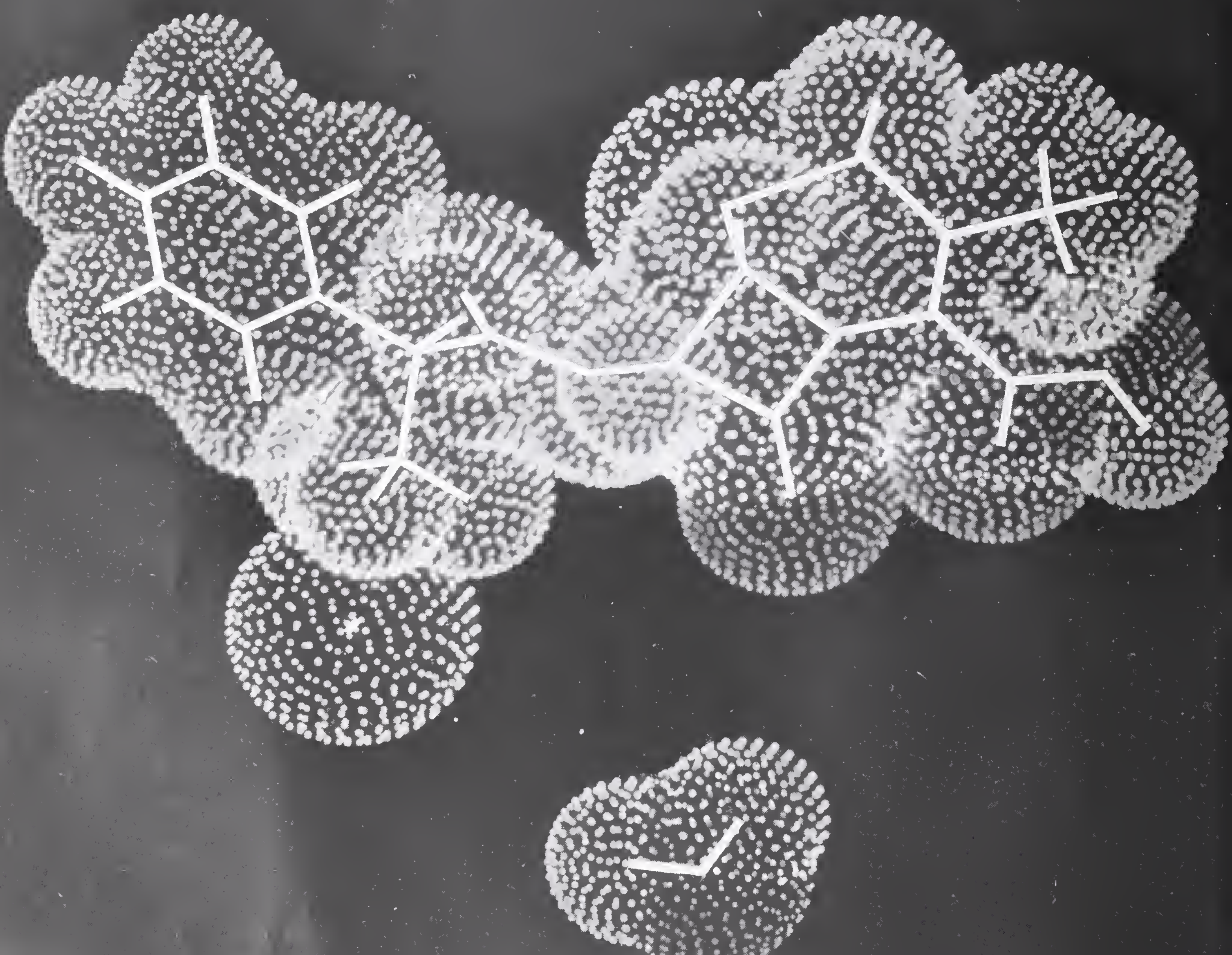

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ue to susceptible strains of *Escherichia coli, Proteus mirabilis*, and *Klebsiella* sp.
ue to susceptible strains of group A β-hemolytic streptococci.

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Indications and Usage:

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Skin and skin structure infections caused by susceptible strains of *Staphylococcus aureus* and/or β-hemolytic streptococci.

Bone infections caused by susceptible strains of *S aureus* and/or *Proteus mirabilis*.

Genitourinary tract infections, including acute prostatitis, caused by susceptible strains of *Escherichia coli, P mirabilis*, and *Klebsiella* sp.

Contraindication: Known allergy to cephalosporins.

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Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Keftab in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Keftab should be administered cautiously in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy and lactation. Cephalexin is excreted in mother's milk. Exercise caution in prescribing Keftab for these patients.
- Safety and effectiveness in children have not been established.

Adverse Reactions:

- *Gastrointestinal*, including diarrhea and, rarely, nausea and vomiting. Transient hepatitis and cholestatic jaundice have been reported rarely.
- *Hypersensitivity* in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson syndrome, or toxic epidermal necrolysis.
- *Anaphylaxis* has been reported.
- *Other reactions* have included genital/anal pruritus, genital moniliasis, vaginitis/vaginal discharge, dizziness, fatigue, headache, eosinophilia, neutropenia, and thrombocytopenia; reversible interstitial nephritis has been reported rarely.
- Cephalosporins have been implicated in triggering seizures, particularly in patients with renal impairment.
- *Abnormalities in laboratory test results* included slight elevations in aspartate aminotransferase (AST, SGOT) and alanine aminotransferase (ALT, SGPT). False-positive reactions for glucose in the urine may occur with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

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Physician's Recognition Awards

Twenty-one MSMA members qualified for the MSMA-AMA Physician's Recognition Award during November 1987.

The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Boone

Susan W. Krechel, *Jonesburg*

Cape Girardeau

Robert E. Gardner, *Cape Girardeau*
David M. Trantham, *Cape Girardeau*
Anthony C. Zoffuto, *Cape Girardeau*

Franklin-Gasconade-Warren

Joseph A. Murney, *Washington*

Metro Med-Greater Kansas City

Philip J. Baker, *Independence*
Alan J. Ferber, *Kansas City*
Bernard J. Melia, *Kansas City*
Peter J. Muelleman, *Independence*

Greene

Paul N. Arnold, *Springfield*
Michael S. Clarke, *Springfield*

Jasper

Ali H. J. Abu-Libdeh, *Joplin*
Ricky L. Scacewater, *Joplin*

Northeast

George P. Kerkemeyer, *Hannibal*

St. Louis Metropolitan

Behrooz A. Akbarnia, *St. Louis*
Vatche H. Ayvazian, *St. Louis*
Samuel A. Canaan, *St. Louis*
Arthur L. Casey, *St. Louis*
Marvin A. Cook, *St. Louis*
Charles A. Molden, *Bridgeton*
Jacques P. Schaerer, *St. Louis*

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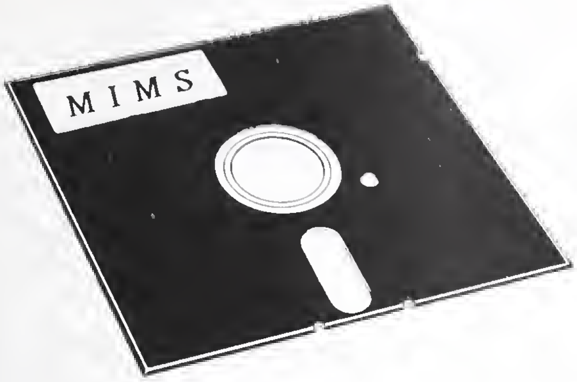
An Invitation . . .

The Editorial Board of *Missouri Medicine* invites the members of the Missouri State Medical Association to submit examples of their art work for publication on the cover of *Missouri Medicine.* Color photographs, preferably transparencies, as well as photographs of paintings, drawings, sculpture, ceramics, jewelry, etc. are all welcome. There is no limit as to subject, although pictures of Missouri or subjects topical to a month or season may have a slight advantage. Please submit entries to "Cover," *Missouri Medicine*, P.O. Box 1028, Jefferson City, MO 65102.



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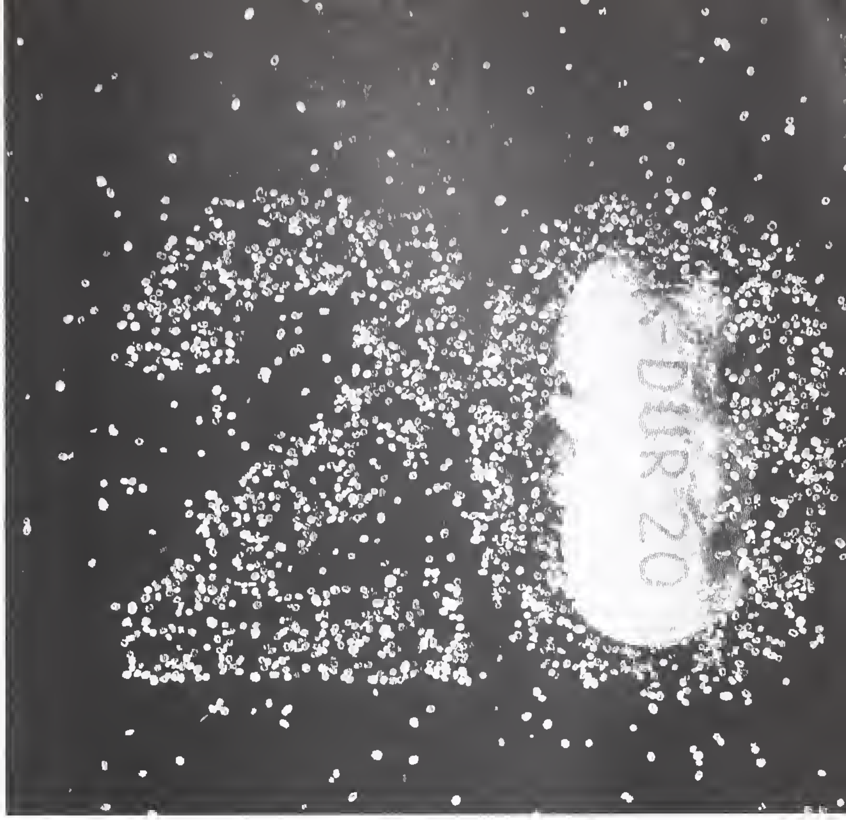

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INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1 For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3 The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-OUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS);** other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1 Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3 Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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In Memoriam

- **Charles L. Abramson, M.D.,** died November 19, 1987 at the age of 51. Dr. Abramson, a radiologist, obtained his medical degree in 1963 at the Medical Facility at the University of Basel in Switzerland. He was a member of the St. Louis Metropolitan Medical Society.

- **Berneil W. Andrews, M.D.,** died December 20, 1987 at the age of 70. Dr. Andrews, a urologist, practiced medicine in Kansas City for 34 years. He graduated in 1940 from the two-year program at University of Missouri-Columbia Medical School and was a 1942 graduate of the University of Louisville Medical School. He was a member and past president of the staff of Trinity Lutheran Hospital. Dr. Andrews was a member of the Clay-Platte County Medical Society.

- **Virgil E. Jeans, M.D.,** died December 15, 1987 at the age of 80. Dr. Jeans, a general surgeon, practiced medicine in Joplin for almost 30 years before retiring in 1972. As a major in the U.S. Army, he served as head of a surgical team of the First Auxiliary Surgical Group from September 1943 to June 1945. After returning to Joplin, Dr. Jeans was a member of the staffs of St. John's Regional Medical Center and Freeman Hospital. He obtained his medical degree in 1932 from Washington University. Dr. Jeans was a member of the Jasper County Medical Society.

- **Jonathan B. Peebles, M.D.,** died October 30, 1987 at the age of 78. Dr. Peebles, a urological surgeon, obtained his medical degree in 1933 at the University of Tennessee College of Medicine in Memphis, TN. He was a member of the St. Louis Metropolitan Medical Society.

- **William A. Staggs, M.D.,** died December 6, 1987 at the age of 78. Dr. Staggs, a urologist, practiced medicine in Kansas City, where he lived most of his life. He was an Army physician in World War II and held the rank of lieutenant colonel. He obtained his medical degree in 1936 from the University of Iowa. Dr. Staggs was a member of Metropolitan Medical Society of Greater Kansas City.

- **Ned M. Stanfield, M.D.,** died November 19, 1987 at the age of 80. Dr. Stanfield, an anesthesiologist, obtained his medical degree in 1950 at Meharry Medical College in Nashville, TN. He was a member of the St. Louis Metropolitan Medical Society.

- **Donald L. Thurston, M.D.,** died December 25, 1987 at the age of 77. Dr. Thurston, a pediatrician, obtained his medical degree in 1937 at Vanderbilt University School of Medicine. He was a member of the St. Louis Metropolitan Medical Society.

- **Edwin O. Wicks, M.D.,** died December 20, 1987 at the age of 74. Dr. Wicks was a former director of the Kansas City Health Department, serving from 1967 to 1974. Prior to that he was director of the New Mexico Department of Health serving from 1964 to 1967. He obtained his medical degree in 1950 from the University of Minnesota, where his specialty was public health. Dr. Wicks was a member of the Clay-Platte County Medical Society.

We incorrectly listed Robert H. Michaels, M.D. of Springfield in our January "In Memoriam." Our apologies to Dr. Michaels for the inconvenience it may have caused him, his family and associates.

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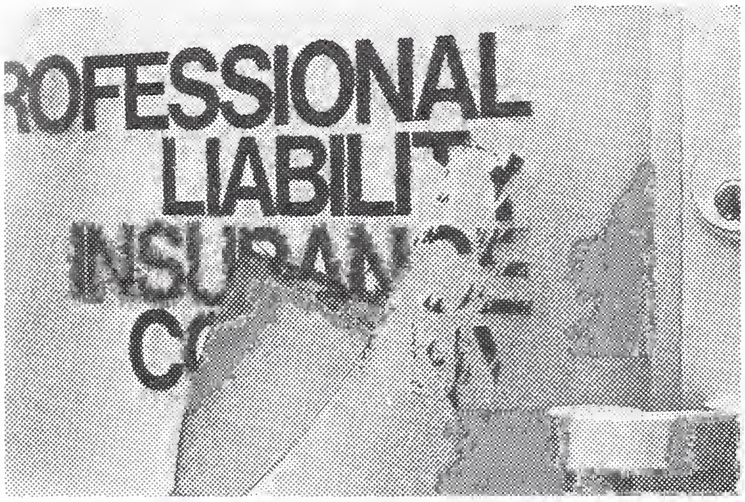

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Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

February

10-12 **"8th National Conference on CAPD"** — Location: Westin Crown Center Hotel, Kansas City, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

12-14 **Organizational Systems** — Location: Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

20-21 **Family Practice Update** — Location: Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

20-22 **"Advanced Cardiac Life Support Provider Course"** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, St. Louis University School of Medicine, CME Office, 1402 S. Grand Ave., St. Louis, MO 63104. 314/577-8167.

22-26 **Physician in Management** — Location: The Royal Plaza at Disney World, Orlando, FL. Contact: Sherry Mason, The American Academy of Medical Directors, 4830 W. Kennedy Blvd., Suite 648, Tampa, FL 33609-2517 813/287-2000.

March

4-6 **Aneurysm Clipping Techniques** — Location: St. Louis University Medical Center, St. Louis. Contact: Anita Herbst, CME coordinator, St. Louis. University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

14 **"2nd Annual Daniel R. Biello Memorial Lecture: 'Cardiovascular Nuclear Medicine' "** — Location: Mallinckrodt Institute of Radiology, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

16 **Sixth Annual Symposium on Geriatric Medicine** — Location: Breckinridge Inn Frontenac, St. Louis, MO. Contact: Anita Herbst, CME coordinator, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

24-26 **Midwest Regional Oncology Conference III** — Location: Hyatt Regency Crown Center, Kansas City. Contact: Beth Paul, Conference Planner, Center for Continuing Education, St. Luke's Hospital of Kansas City, Wornall Road at 44th, Kansas City, MO 64111. 816/932-2301.

April

11 **"Leroy Sante Lecture"** — Location: St. Louis University, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

14-15 **Respiratory Critical Care** — Location: Holiday Inn Executive Center, Columbia, MO. contact: Barry Kling, University of Missouri-Columbia, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

15 **Lymphoma Update 1988: New Diagnostic and Treatment Strategies** — Location: Jewish Hospital at Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

15-16 **Frontiers in Endoscopy** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

20-21 **Advanced Contact Lens Seminar** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

26-29 **Clinical Allergy — Inhalent and Food Sensitivity "Review and How-to"** — Location: Alameda Plaza, Kansas City, MO. Contact: Missouri Postgraduate Course in Allergy, Inc., 24-26 S. Main St., Suite A, Liberty, MO 64068. 816/781-0902.

April (Cont.)

28-29 **15th Annual Symposium on Obstetrics and Gynecology** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

29-30 **"Eating Disorders"** — Location: Hyatt Regency, Kansas City, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

May

9 **"Direct Digital Radiography"** — Location: Mallinckrodt Institute of Radiology, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

11-12 **Current Management in Critical Care** — Location: Alameda Plaza Hotel, Kansas City, MO. Contact: Linda Smutz, Kansas City Southwest Clinical Society, 222 W. Gregory Blvd., Suite 323, Kansas City, MO 64114. 816/523-3383.

12-13 **Pediatric Advance Cardiac and Trauma Life Support Provider Course** — Location: Cardinal Glennon Children's Hospital, St. Louis. Contact: Virginia Engel, Nursing Service Administration, Cardinal Glennon Children's Hospital, 314/577-5657.

13-15 **"Emergency Room Legal Environment: Medicine's Response"** — Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, St. Louis University School of Medicine, CME Office, 1402 S. Grand, St. Louis, MO 63104.

19-21 **Progress in Clinical Pediatrics IV: Advances in Hematology and Oncology and Transplantation in Children: The State of the Art** — Location: St. Louis Children's Hospital at Washington University Medical Center, St. Louis, MO. Contact: Sharon Thiemann, CME Services, Children's Hospital, 400 South Kingshighway, St. Louis, MO 63110 314/454-2231.

June

18-23 **Allergy: Back to the Basics in the Tetons** — Location: Jackson, WY. Contact: Missouri Postgraduate Course in Allergy, Inc., 24-26 S. Main St., Suite A, Liberty, MO 64068. 816/781-0902.

25-27 **Advanced Cardiac Life Support Provider Course** — Location: St. Louis University Medical Center, Learning Resources Center. Contact: Anita Herbst, CME coordinator, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

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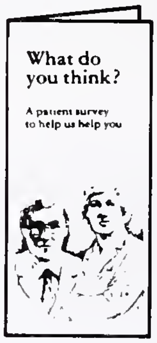
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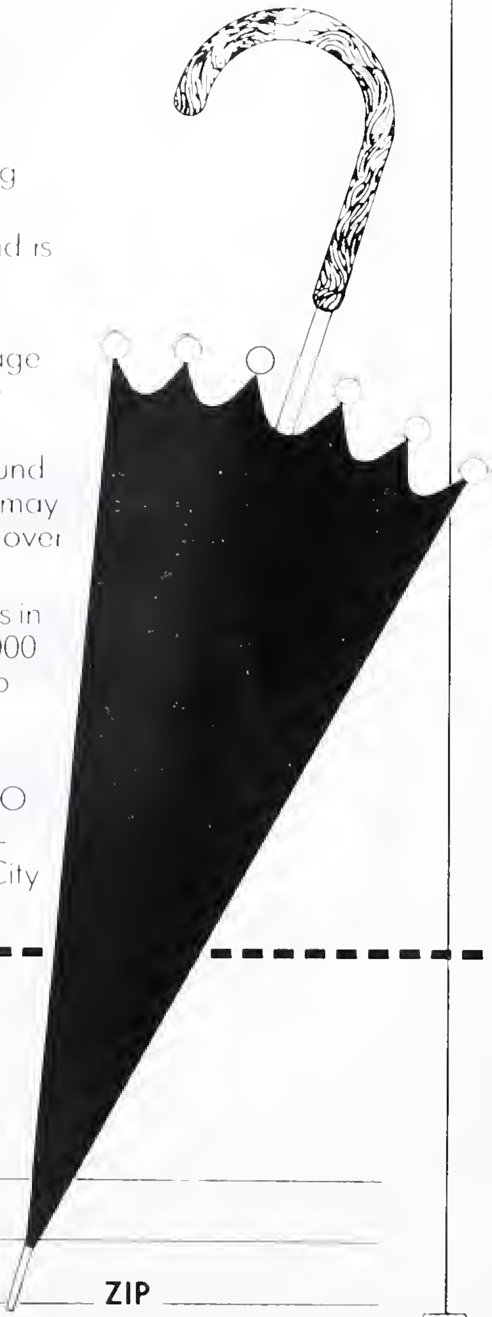

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Final Disciplinary Actions

At the December 1987 meeting of the State Board of Registration for the Healing Arts, the following final disciplinary actions were taken. This information is made available to the public under the provisions of Section 334.101 RSMo.

■ **JAMES R. AMOS, M.D.,** *Lebanon, Missouri*
Voluntarily surrendered his controlled substance authority. Board accepted surrender December 5, 1987.
Dr. Amos violated Section 334.100.2(22) RSMo.

■ **ELMER H. VANDYKE, M.D.,** *Sedalia, Missouri*
Order dated December 15, 1987. Two month suspension of license effective January 4, 1988. Five years probation effective March 4, 1988.
Dr. VanDyke violated Section 334.100.2(5) RSMo.

■ **CARL ROY SMITH, M.D.,** *Alexandria, Louisiana*
Voluntarily surrendered license December 5, 1987.
Dr. Smith violated Section 334.100.2(21) RSMo.

■ **HAROLD STINSON, D.O.,** *Eureka, Missouri*
Order dated December 28, 1987. Revocation of Dr. Stinson's license.
Dr. Stinson violated Section 334.100.2(13) RSMo.

■ **LEONARD F. FAYMORE, D.O.,** *Oxford, Wisconsin*
Order dated December 29, 1987. Revocation of Dr. Faymore's license.
Dr. Faymore violated Section 334.012 RSMo.

■ **JUAN LASES, M.D.,** *Tulsa, Oklahoma*
Order dated December 28, 1987. Revocation of Dr. Lases's license.
Dr. Lases violated Section 334.100.2(2) RSMo.

■ **LEO MULLEN, M.D.,** *Kansas City, Missouri*
Order dated December 29, 1987. Revocation of Dr. Mullen's license.
Dr. Mullen violated Section 334.100.2(13) RSMo.

Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in Missouri Medicine is protected by copyright.

Manuscripts should be submitted to the editor, Jordan W. Burkey, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

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Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

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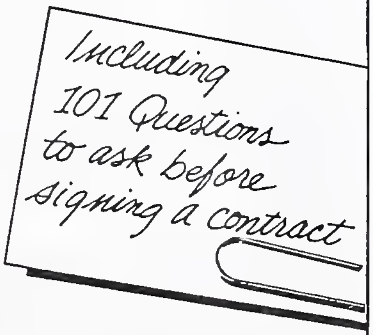

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Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

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In moderate depression and anxiety

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References: 1. Feighner JP, *et al: Psychopharmacology 61* 217-225, Mar 22, 1979 **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ

Limbitrol® Ⓒ IV
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of moderate to severe depression associated with moderate to severe anxiety

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved Contraindicated during acute recovery phase following myocardial infarction

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses Myocardial infarction and stroke reported with use of this class of drugs) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e g* , operating machinery, driving)

> ***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide)

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients Periodic liver function tests and blood counts are recommended during prolonged treatment Amitriptyline component may block action of guanethidine or similar antihypertensives When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery Limit concomitant administration of ECT to essential treatment See Warnings for precautions about pregnancy Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects

Adverse Reactions: Most frequently reported are those associated with either component alone drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs

Cardiovascular. Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric. Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido

Neurologic Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus

Hematologic Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia

Gastrointestinal Nausea, epigastric distress, vomiting. anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion

Other Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling

Overdosage: Immediately hospitalize patient suspected of having taken an overdose Treatment is symptomatic and supportive I V administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning See complete product information for manifestation and treatment

Dosage: Individualize according to symptom severity and patient response Reduce to smallest effective dosage when satisfactory response is obtained Larger portion of daily dose may be taken at bedtime Single *h s* dose may suffice for some patients Lower dosages are recommended for the elderly Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12 5 mg amitriptyline (as the hydrochloride salt) Available in bottles of 100 and 500, Tel-E-Dose® packages of 100, Prescription Paks of 50

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Missouri Medicine

Journal of the Missouri State Medical Association

March 1988

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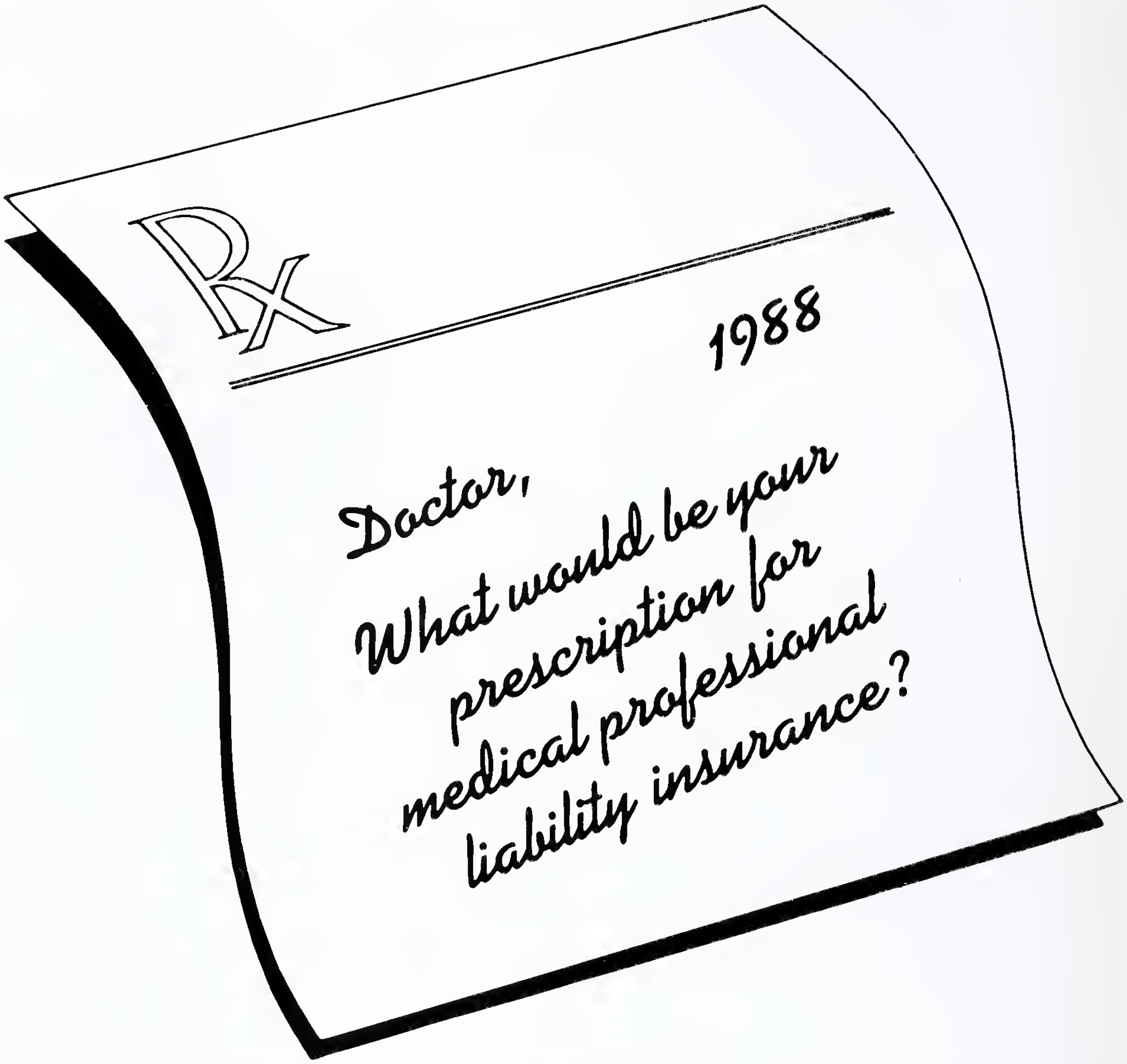
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"**Meramec Springs Memory I**" 30" x 40" pastel and watercolor by **Terri L. Martin** of *Columbia, MO*. This is one of a series of pastel and watercolor paintings depicting Missouri rivers and lakes completed by the artist during the summer months of 1987.

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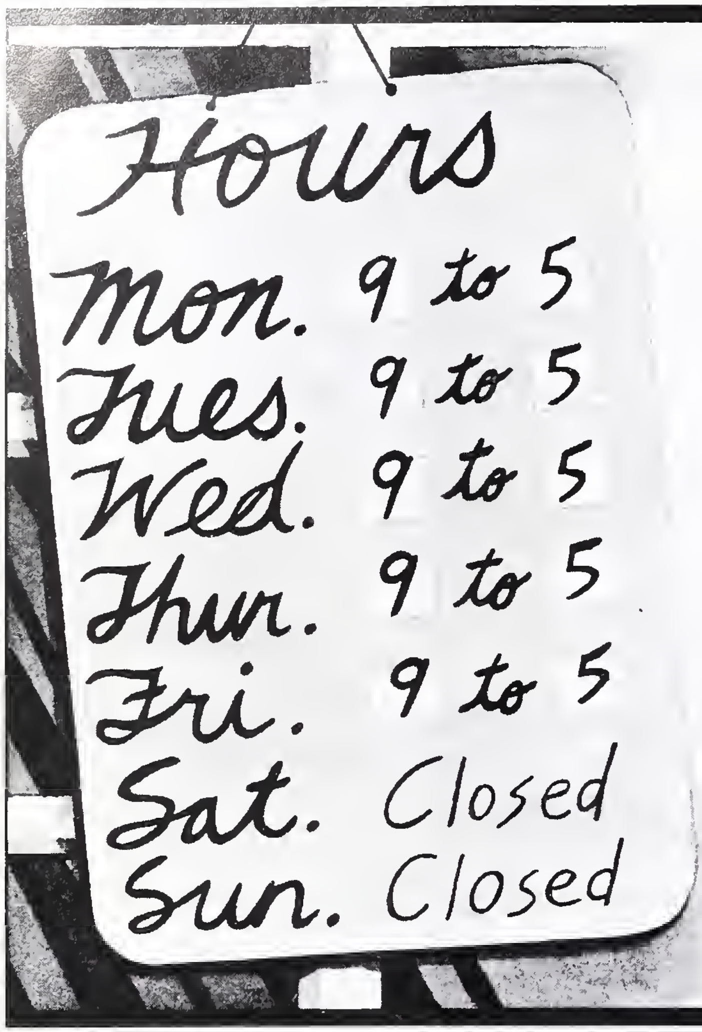

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MSMA Progress Notes

January 30 Council meeting highlights

The MSMA Council met January 30 at the Holiday Inn Executive Center in Columbia. Here is a summary of the Council actions:

- Approved the minutes of the December 15, 1987 Council meeting.
- Approved and adopted all four recommendations of the Commission on Public Affairs, as reviewed by the Executive Committee.
- Approved April 17-21 for the 1991 Annual Convention, to be at the Hyatt Regency, Kansas City.
- Approved the following voting proxies for upcoming annual meetings:

Drs. Ekern and Piepergerdes and Mr. Cooper for MSMI.
Drs. Ekern, Cooper, Meyer and Lottes and Mr. Cooper for MOMEDICO.

- Approved these dates for 1988 workshops:

Collections and Patient Flow — March 10, St. Louis; March 11, Kansas City
Third Party Reimbursement — May 3, St. Louis; May 4, Kansas City
Plan for Retirement — May 5, St. Louis

- Approved the Executive Committee's recommendation to undertake a Medicaid study. Fiscal note: $21,000.
- Approved the appointments of Donald G. Sessions, M.D., of St. Louis as editor, MISSOURI MEDICINE, and Ramona Chapman, M.D., of Joplin as associate editor.
- Adopted recommendations 1-7 from the Sunsetting Committee and referred No. 8 (on electroconvulsive therapy) to the Executive Committee.
- Voted to participate in negotiations on the question of physician employment of physical therapists.
- Voted to take Dr. Bunge's Young Physicians' Section resolution forming a Young Physicians Organizational Committee and introduce it in the House. Fiscal note to be attached that will provide funding for young physicians' attendance at AMA meetings.
- Voted to hold a Spring Retreat and Training Session for Council development, May 7-8, at the Lake of the Ozarks.
- Approved Dr. Cooper's proposal for identifying, by card or similar mechanism, those Medicare-eligible patients who should not be balance-billed by virtue of their income level.
- Approved introduction of two resolutions by the Council at the 1988 House of Delegates: Bylaws regarding Hospital Medical Staff Section (HMSS) membership and a waiver of dues for political officeholders.
- Voted to invite Vice Councilors to attend, although with no vote, all Executive Sessions of the Council.

The next Council meeting will be March 16 at the Hyatt Regency in Kansas City. ■

February 1 Missouri Register update

Generic drug formulary amended. The February 1 Missouri Register has an emergency rule regarding generic drug formulary. It was amended in order to reflect new generic drug products recently approved by the FDA. This emergency rule became effective on February 1, 1988.

- For oral dosage of Amitriptyline HCl in 10 mg., 25 mg., 50 mg., 75 mg., 100 mg., and 150 mg. tablets, Mutual Pharm. is now included on the substitution list.
- For Betamethasone Dipropionate creme topical, Lemmon and Thames Pharma. are now acceptable substitutes.
- Idomethacin capsules (controlled release) may now be filled by products from Merck Sharp & Dohme Research Labs and Vitarine.
- For Leucovorin Calcium tablets in 5 mg. and 25 mg., Barr Labs and Burroughs Wellcome are now acceptable substitutes.
- Medroxyprogesterone Acetate tablets may now be filled by Ayerst Labs & Upjohn.
- Metaproterenol Sulfate as a solution for inhalation may now be filled by Boehringer Ingelheim or Dey Labs.
- The Methylprednisolone tablet and the Oxazepam capsule may now be generically substituted.
- For Potassium Chloride as a tablet (controlled release), Ciba Pharmaceuticals and Copley Pharmaceuticals are now acceptable substitutes.
- Procainamide Hydrochloride 250 mg. tablet (controlled release) also may be filled by Cord Labs.
- The Quinidine Gluconate 324 mg. tablet (controlled release) also may be filled by Halsey Drug.

The Visiting Professor Rule. The State Board may grant a temporary license to certain physicians to teach or lecture in AMA and AOA approved teaching hospitals and medical schools. The Board in its sole discretion may also issue a temporary "visiting professor" license to a physician who has not met all the requirements for permanent Missouri licensure if the applicant is licensed in another state or foreign country. These temporary licenses automatically expire in 30 days.

Minimum Requirements for Reinstatement of Licensure. Physicians seeking to reinstate a license that has been revoked, suspended or inactive for more than 2 years, must present with their application evidence of satisfactory completion of CME for each year the license was inactive. In addition, the physician must successfully pass during the inactive period either the American Specialty Board Certifying Exam in their specialty, Part II of the FLEX, or the Federation of State Medical Board's Special Purpose Examination (SPEX). ■

MSMA registers objection to HCFA requirement

In mid-December, physicians in Missouri were informed by General American that HCFA had mandated a change in the wording on Medically Unnecessary Release forms. Prior to this notice, the language on the release advised beneficiaries that "services shown on this billing may be denied by Medicare Part B as medically unnecessary." Effective January 1, providers were to instruct patients that "services shown on this billing *will be* denied by Medicare Part B as medically unnecessary" (emphasis added).

President Larry G. Piepergerdes, M.D., on behalf of the MSMA, wrote to HCFA's Associate Regional Administrator for Program Operations early in January to voice the Association's objection to the revised language on the release. He pointed out the near impossibility of determining, before the fact, what services will eventually be denied by Medicare. He asked reconsideration of the new mandate.

In reply, Regional Administrator Edward M. Brennan attempted to clarify the new rules. Brennan stated that no release form is required when the physician believes a service is medically necessary. When such a service is denied, there is always recourse to establish medical necessity, Brennan said.

If the physician believes the Medicare carrier will deny a service, he may obtain a release form from the patient. Brennan said that although the "will be denied" language laid out by General American must be used, the physician is not precluded from stating that he believes the services are medically necessary even even though the carrier may not agree. Brennan concluded by saying HCFA was unable to "grant . . . any relief from the provisions of . . . the Omnibus Reconciliation Act of 1986," but was willing to answer questions physicians might have. ■

Medicaid physician fees to be subject of study

Reimbursement to physicians for services rendered to Medicaid patients in Missouri has been notoriously poor. A report from the Public Citizen Health Research Group cited Missouri as having one of the poorest Medicaid programs in the nation and noted that Missouri's physician reimbursement levels are particularly "stingy."

The Department of Social Services Division of Medical Services for several years has gone before the Legislature with requests for increased funding for physician reimbursement. However, previous requests have been cut by the General Assembly or vetoed by the Governor.

Spurred by the Division's plea for action, the MSMA is funding a study of physician reimbursement under Medicaid. The study is designed to:

- Compare Missouri's reimbursements to other states'.
- Document the economic changes of practicing medicine in Missouri.
- Document the drop-out rate of physicians in Medicaid. Are indigent patients being denied access to necessary health care?
- Propose innovative incentives (financial and non-financial) to encourage physician participation.
- Attempt to dispel the notion that all physicians reap huge profits from their practice and can, therefore, absorb the time and cost of providing uncompensated care.
- Compile a report in laymen's language so that legislators and state officials will understand the problem.
- Propose a course of action for the state to move from the present level toward full reimbursement of prevailing rates.

The research and report should be completed by June 15, 1988. The division of Medical Service will have this information in time to make budget requests for fiscal 1989.

MAOPS has declined to participate in this project. ■

HMSS meeting held January 30-31

The Hospital Medical Staff Section (HMSS) of MSMA met in Columbia at the Executive Center on January 30-31.

The HMSS model bylaws, recently approved by the Council, were distributed to attending delegates. Additional copies of the bylaws are available for $10 to MSMA members and $25 to nonmembers.

Charles Barbee, M.D., of Columbia was re-elected as

HMSS Councilor for the MSMA Council while William Dorzab, M.D., of Kansas City was re-elected as HMSS Vice-Councilor.

Presentations featured J. Michael Conoyer, M.D., of St. Peters who is secretary for the Board of Healing Arts; Robert J. Weierman, M.D. of New Jersey who is an expert on the Committee on Utilization Review Systems (COURS); Peter Van Schoonhoven, M.D. of Chicago who is with the Joint Commission and William D. Bradshaw of Columbia who is president of the Missouri PRO. ■

Continued plans for tort reform

The Committee to Preserve Health Care has planned their 1988 actions to affect tort reform in Missouri. Composed of representatives from the Missouri State Medical Association, the Missouri Hospital Association, MOMEDICO, Medical Defense Associates and Hospital Services Group, the Committee has organized these activities:

- Evaluate the impact of the Medical Malpractice Law, S.B. 663. Although the Committee has applied for a grant from the Robert Wood Johnson Foundation to help accomplish this task, they will pursue this effort with or without the grant. It is essential to evaluate S.B. 663 before the legislative moratorium expires in January 1990.
- Study the workers compensation model for handling medical malpractice claims. The AMA has designed a new Medical Liability Project as an administrative alternative to the current judicial dispute resolution system. The Committee will study the AMA proposal and recommend whether Missouri should be one of the pilot program states. In addition, they will research the new Virginia law covering resolution of malpractice claims as well as study H.B. 522, introduced by Rep. Banton, that creates a similar system in Missouri.
- After the close of the 1988 legislative session, the Committee will hold a series of meetings with the Missouri Association of Trial Attorneys (MATA) to discuss and negotiate legislative tort reform. The Committee and the MATA executive board will discuss the following issues, among others; their goal is to reach an agreement both sides will support when the legislative moratorium ends in January 1990:

—statute of limitations for minors
—clarification of expert witness affadavit
—collateral source rule
—tolling of the statute of limitations (raised by Poling-Moitra court decision)
—reforms raised at easing obstetrical care

- Continue the Committee's involvement in the American Tort Reform Association's activities. ■

License renewal reminder

For those of you who missed the January 31 deadline for your state license renewal, the State Board of Registration for the Healing Arts sent second notices the last week of February.

Be sure to send in your license renewal application and the $30.00 fee no later than April 1. After that date, a $25 late charge is added and the amount owed the Board increases to $55.00.

If you have any questions, contact the State Board of Registration for the Healing Arts, P.O. Box 4, Jefferson City, MO 65102 314/751-2334. ■

New limit on non-economic damages

Under the provisions of S.B. 663, the director of insurance is required to calculate the new limitation for non-economic damages in medical malpractice. The new limit is $373,000.

Here is how the amount was calculated. The implicit price index for personal consumption is followed, using January 1, 1986 as the base. The calculation is shown below:

January 1, 1986 index	113.4
January 1, 1988 index	120.8
Change 1/1/86-1/1/88	7.4
percent of change	6.52%
New limits	
(350,000 × 1.0652)	372,750.00
rounded to	$373,000

■

Convention 1988

Kansas City will host the 130th Annual Convention of the Missouri State Medical Association March 17-20 at the Hyatt Regency. More than 1,000 persons will attend the annual meeting.

During the 9:00 a.m. General Session on March 18, three outstanding specialists will discuss medical ethics. MSMA members are encouraged to provide questions and comments for the panel.

Speaking on "Death and Dying: The Ethical Issues" will be The Rev. Kevin O'Rourke, O.P., Russell Patterson, M.D. and Susan Wolf, J.D. Ronald Youmans will serve as moderator.

Each speaker brings unique insight to this critical topic. Fr. O'Rourke is the director of the Center for Health Care Ethics at St. Louis University. Dr. Patterson is vice-chairman of the AMA Judicial Council and Ms. Wolf is an attorney with the Hastings Center. A past-president of MSMA, Dr. Youmans is chairman of the MSMA Judicial Council.

Also featured at Convention, 18 specialties and three affiliated groups are sponsoring scientific programs. ■

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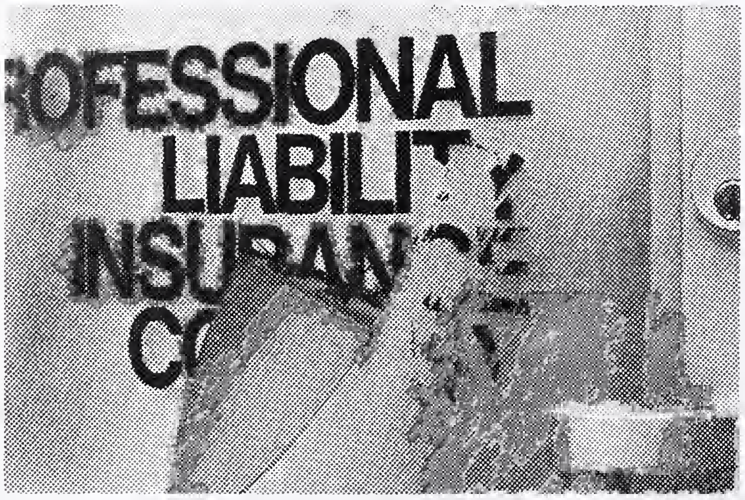

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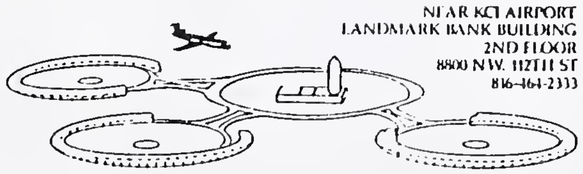

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Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:
Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Prefilled Syringes: 300 mg./2 ml. in single-dose prefilled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

ADD-Vantage®* Vials: 300 mg./2 ml. in single-dose ADD-Vantage® Vials, in packages of 25.

Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

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BRS-TG:L73B Date of issuance Apr. 1987

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* **WARNING**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: *Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.*
Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. *If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake.* ***Associated widened QRS complex or arrhythmia requires prompt additional therapy.*** *Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.*
Precautions: *The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin[ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.*
Adverse Reactions: *Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.*
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ:L45

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EDITOR'S DESK

by Jordan W. Burkey, M.D.
Editor

"Hard work and dedication have allowed most physicians to live comfortable lives, when they have time to enjoy them."

Medicine and money matters

Are physicians really as money-minded as a large portion of the public seems to believe? That's a thought that crosses every doctor's mind at times, especially after reading the latest survey indicating such perception, or hearing a version of the old joke about doctors operating on their patients' pocketbooks.

Money isn't everything. One's life style doesn't change much after the first hundred million dollars.
*—An Wang**

Physicians do deal with a good deal of money; *Medical Economics* flourishes on that basis. Doctors are the star performers in the health field, which currently expends over a half a trillion dollars a year in the United States. They earn an average of $100,000 a year, and then spend 15% of it in various ways combating the malpractice problem. As a group, they are generous contributors to worthy causes, but in the business world physicians classically perform poorly. P. T. Barnum's famous remark has been paraphrased to state "There's an investor born every minute"; a good many of them own stethoscopes.

Money buys everything except love, personality, freedom, immortality, silence and peace.
*—Carl Sandburg**

Are medical doctors really leading the parade of increased fees? One survey by the Blues showed a 70% increase in chiropractor fees in the past four years, compared to 33% for physicians. The doctors' recent voluntary freeze on fees was unique to say the least and probably totally incomprehensible to members of other professions.

Most doctors we see, at least out in the state, don't appear to be spending much of their income on their clothing. Undeniably, the same physicians do seem to dote on expensive automobiles. When the medical school dean at Kansas University was doing a bit of politicking to gain some funding from the state legislature years ago, he first made the professors at the school sell their Cadillacs. Obviously this was before the day of Mercedes, which Senator Dole wants to get out of physicians' garages.

I don't like money, but it quiets my nerves.
*—Joe Louis**

Hard work and dedication have allowed most physicians to live comfortable lives, when they have time to enjoy them. None of us went through medical school and extra training to qualify for the poor farm, but we question whether avarice was high on the list of reasons for spending half a lifetime in training to eventually become doctors for our remaining years. ■

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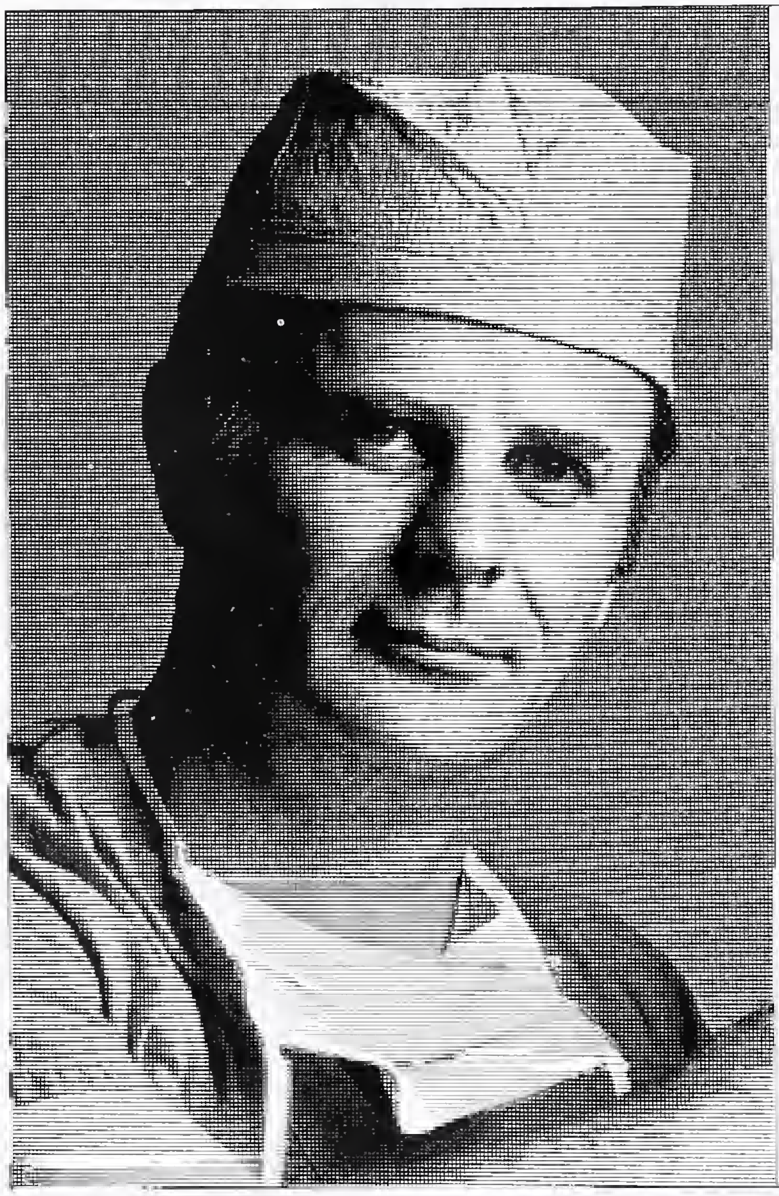
* *Quotations from the collection of Dr. Will Wooldridge, Editor emeritus of* Missouri Medicine.



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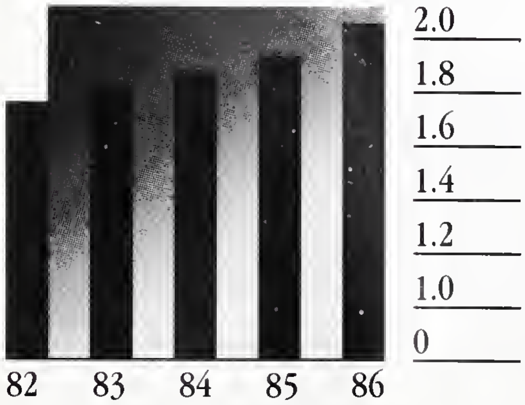

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MSMA Member Viewpoint

A Piece of My Mind

G. David Dixon, M.D.

It has been several months now since I sat through a series of slides put together by Dr. Kendall McNabney from Truman Medical Center in Kansas City. He had spent some time in The Vietnam War, as I had.

Since he was a surgeon, there were slides of the high velocity fragment wounds which destroyed tissue and bone to the extent that civilian physicians cannot imagine. Yes, these were terrible tragedies for our young men and the 54,000 of them who did not survive. On this, we can all agree — a national tragedy of major proportions.

But Dr. McNabney also showed pictures of the Vietnamese — friends and acquaintances — who were eager for the American help to somehow save their land from the invaders from the North. I, too, took many pictures of the "locals" — friendly, happy people living ordinary lives and trying to survive in that land being torn apart by war.

I believe that we can probably agree that one of the reasons for the result in Vietnam was a perceived loss of will by the American people to persevere to the end. This loss of will, I presume, was in no small part due to the daily pronouncements of a few fellow citizens of ours heard by many through the radio and television news media. To me, the real tragedy of Vietnam was not the death and injuries to American GI's but our unwillingness to follow through and to persevere until forces friendly to us and, hopefully more friendly to those Vietnamese, succeeded.

The same day I saw Dr. McNabney's slides I also heard news reports of marching in Washington to protest aid to the Contras who are fighting to make Nicaragua a bit freer and to get it out of Communist control.

As Americans, I see us mostly as a people who respond to crisis situations, rather than looking into the future and planning ahead. Perhaps it is time we start doing this before both San Salvador and, a few years from now, also Mexico fall.

Yes, I feel the real tragedy of Vietnam was not inflicted upon American GI's but upon the American citizenry and politicians by fellow Americans. Those people in Southeast Asia who depended upon us and trusted us will never forget that tragedy. Do we dare to allow it to be repeated in Central America?

I think not. Somehow we must find a way to persevere in the Americas. ■

The author is a radiologist in Kansas City, MO.

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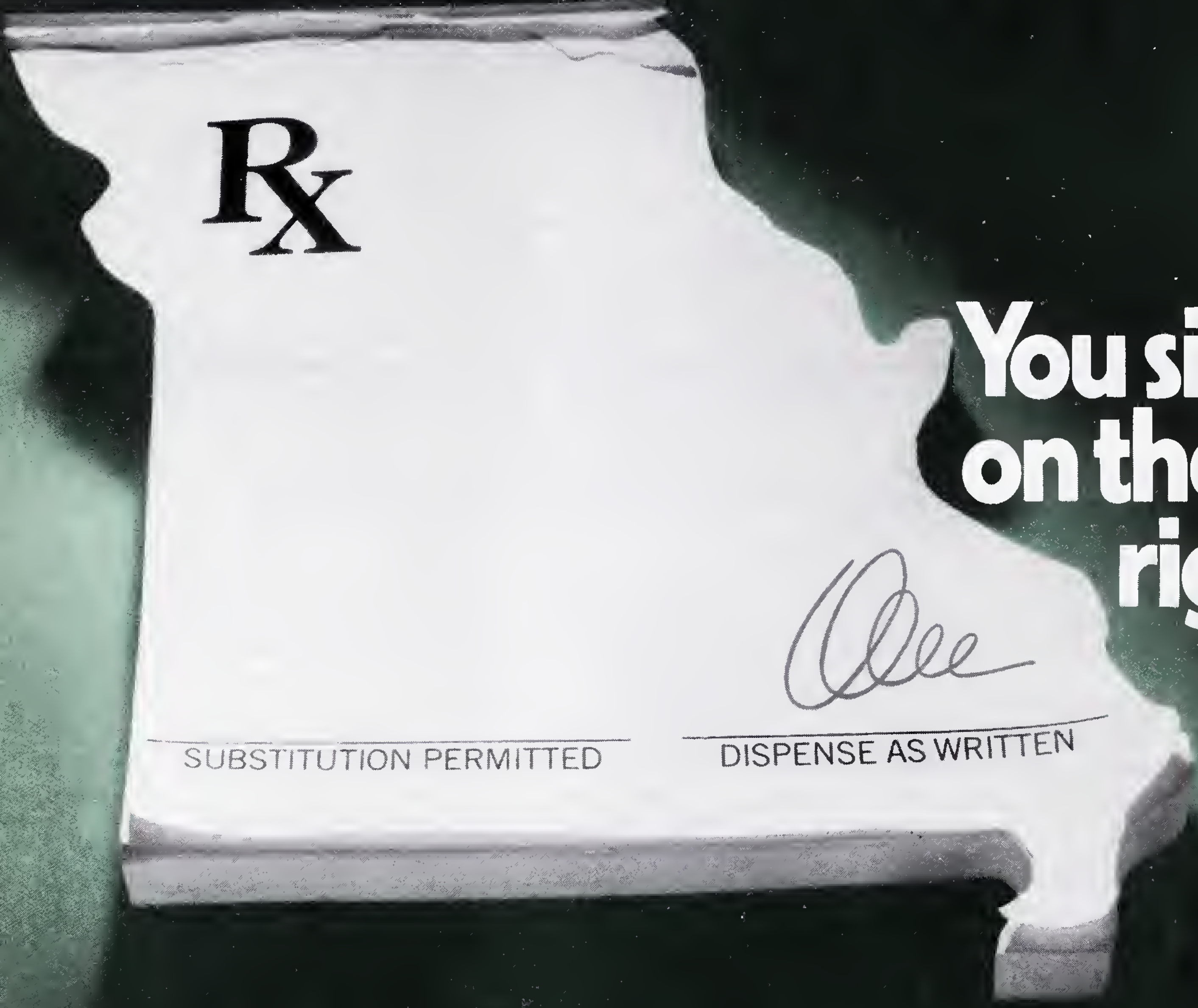
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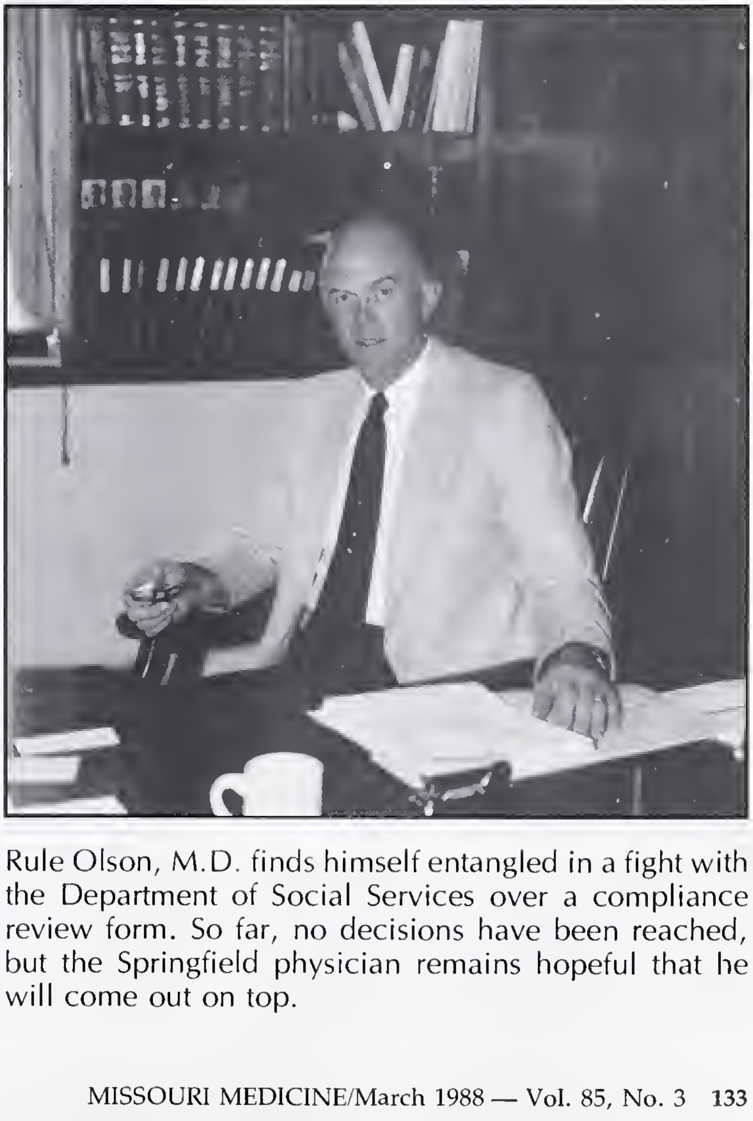
Olson Battles DOSS

By Valerie A. Peters

In early May, 1986, Dr. Rule Olson, a Springfield ophthalmologist, received a Compliance Review form (CR-7) from the Department of Social Services (DOSS). The letter attached to the form stated that because Ozark Eye Surgeons received funds from DOSS for provision of services to Medicaid patients, it was necessary for the physicians to confirm that they were delivering services in compliance with all non-discrimination laws, rules, and regulations as stated in state and federal laws. Dr. Olson simply had to answer the questions on the compliance review form and return it within 30 days to the DOSS. But according to Dr. Olson, the questions on the form were not as clear as one might have expected.

"Yvonne started filling out the form and came to some weird questions that she didn't know what to do about," Dr. Olson says. "She filled out the things as best she could, and then she turned it over to me, saying 'What in the world are we going to do with this?'"

And the more he read, the more unhappy he became. Dr. Olson says that it seemed silly to answer questions that referred to discrimination since he knew his office practiced non-discrimination on a daily basis.



Valerie A. Peters Photo

Rule Olson, M.D. finds himself entangled in a fight with the Department of Social Services over a compliance review form. So far, no decisions have been reached, but the Springfield physician remains hopeful that he will come out on top.

"It seemed to me that we saw everybody who called — we don't ask what color they are, what their religion is, what their sex is," Dr. Olson says, "We just see everyone. The best way to answer most of those foolish questions was to simply say we saw everyone, therefore, it's not applicable."

In part III of the compliance review form, one question asked for a summary of patients seen in the office. It asked the number of black, white or other minority patients seen, as well as the number of male and females and the number of patients seen in three separate age groups. According to Dr. Olson, his office had no way of coming up with those figures.

"We don't keep up with that sort of thing," he says. "The computer doesn't even keep track of that information."

According to Dr. Olson, the DOSS responded by suggesting that his office keep a tally sheet daily to record patients in the appropriate categories. Dr. Olson found that idea incomprehensible.

"I asked them, 'do you mean you want us to ask the patient what their race is?'" he says. "'Oh no, you just guess' was their reply. Now isn't that scientific?"

The problem Dr. Olson saw was that the DOSS was willing to accept his filling out the form as true, unadulterated fact. Yet the DOSS was not able to accept the fact that he saw everyone. That statement would not suffice.

"Obviously, if I see everyone, all of these questions don't apply," Dr. Olson says. "And I think that's the defense that should be taken."

The DOSS, after evaluating the completed review form from Dr. Olson, found three deficiencies which required corrective action. The first finding was that Dr. Olson's office was not displaying a non-discriminatory poster within the facility. The second finding was that there was no procedure to maintain records that show the race and sex of the applicants and participants to whom services are being provided. Lastly, the DOSS found that the office had not publicized that the facility provides services to all persons without regard to race, color or national origin.

> "The best way to answer most of those foolish questions was to simply say we saw everyone, therefore, it's not applicable."

Annie L. Reed, compliance officer for the DOSS, requested that Dr. Olson place a poster which stated that discrimination of provision of services is prohibited by law, and if a patient believes that he/she has been discriminated against because of race, color, sex, religion, creed, national origin, ancestry, age, or handicap, he/she may file a complaint with the DOSS. This action would have corrected the first deficiency found.

Ms. Reed also requested that Dr. Olson's office develop a system in which racial, ethnic, age, sex, and handicapped status is gathered on applicants/recipients for services. This information would not be required to be released to any other agency, but would be required to be presented to someone making a review of the facility.

To solve the third problem, Ms. Reed stated that public notification of non-discriminatory policy must be conducted once every two years. To do this, Dr. Olson could advertise in local newspapers, or contact local grassroot organizations by letter or word of mouth to disseminate the information. To be included in any advertisement, and all forms of communication available to the public, including office stationery, was the statement "Rules for acceptance and participation in the program are the same for everyone regardless of race, color, national origin, sex, age, or handicap." Until new material was printed, it was satisfactory to type the statement on present materials.

The letter stated that Dr. Olson was required to submit the required documents showing action taken on these requests by August 8, 1986. Dr. Olson balked at the requests saying that it seemed odd that the DOSS could arbitrarily decide based on a survey that the only things he needed to do was "put up a sign, and put that statement on all my stationery, forms, brochures and prescription pads."

"Someone suggested I get a rubber stamp," he says, half-joking. "The other thing was that I had to advertise in the area newspaper. Come on, physicians don't do that."

Put simply, Dr. Olson did not care for the form he had completed.

"It just really is a form that was never intended for a private physician's office," he says.

Dr. Olson wrote to James Moody, Acting Director of the Department of Social Services and expressed his displeasure with the form and the regulations imposed. He stated that his colleagues and himself were interested in one thing — patient care. Dr. Olson assured Mr. Moody that his office did not discriminate on any grounds. He urged that Missouri avoid "choking on gnats and get on with the business of treating patients."

Whether or not the form was at fault, the DOSS did not agree with Dr. Olson. On June 18, 1987, the Ozark Eye Surgeons received a formal notice from the DOSS informing them that their participation in Medicaid was being terminated effective 30 days from the date the office received the letter. Reasons given for termination included the office's failure to supply civil rights information requested by the agency and to correct civil rights compliance deficiencies after notification of their existence. Termination was to remain in effect until Ozark Eye Surgeons complied with all requirements for participation in the Medicaid program.

Dr. Olson urges that Missouri avoid "choking on gnats and get on with the business of treating patients."

"The termination apparently doesn't prohibit me from seeing the (Medicaid) patients," Dr. Olson says, "it simply prohibits me from billing them."

Dr. Olson and his colleagues issued a formal appeal to the termination on July 14, 1987. The appeal was based on the discrimination shown to the Ozark Eye Surgeons in being singled out of the private medical community for investigation. Dr. Olson stated that after a concerted effort by several resources, no other private physician's offices had been found that were required to complete the compliance review form.

"Without hiring a lawyer, it seemed interesting to me that, according to Royal Cooper and our own informal survey, we're the only private physician (office) that got the questionnaire," Dr. Olson says. "We were told that 300 providers were surveyed and that was supposed to be 10 percent of the providers. But if you multiply that out, that's too many physicians for the state of Missouri. So obviously by providers, they mean wheelchair providers, medication providers, hospitals, day care centers and those sorts of things. So the provider in that case apparently doesn't necessarily mean physician."

"And having nothing else to complain about, I simply said I think you picked on me. I've been discriminated against over discrimination," Dr. Olson says. He issued a personal challenge to the DOSS saying that if they did not like his form to come on down and investigate him.

"They didn't want to get out from behind a desk and do this," he says. "So I feel they have used a most severe form of wrist slapping for a problem which probably doesn't exist."

Dr. Olson says that the DOSS officials are all saying the same thing, that they are mandated to do this and they have no recourse. Each person always claims that he or she is "only doing my job" and that "it's laws."

"But it isn't law, it's regulations," Dr. Olson stresses. "If I am forced to do this, then the obvious answer would be to send one of these forms to every physician in the state of Missouri.

"I feel they have used a most severe form of wrist slapping for a problem which probably doesn't exist."

"And if you've been around us long enough to know what a bunch of rednecks we are, don't you suppose 95 percent of those still participating in the Medicaid program would probably cease doing so?"

Dr. Olson has been practicing and seeing Medicaid patients in Springfield since 1968. And although his office's participation in Medicaid has been terminated for the time being, he continues to see his regular Medicaid patients. To him, it is a matter of principle.

Following his appeal of the termination, Dr. Olson sent letters to several state representatives and senators to call their attention to the situation. He also informed U.S. Senators Christopher Bond and John Danforth of the problem. The response he received was minimal, although Representative Curtis R. Wilkerson of the 135th District conducted further investigation into the incident. In addition, state Senator Emory Melton of Cassville, sent his own letter of inquiry to James Moody, Acting Director of the DOSS.

"The greatest hope of doing something probably comes from Representative Wilkerson, who has launched sort of an investigation, I think with the idea in mind that the forms are out of touch," Dr. Olson says. "And Senator Melton has pointed out that if in fact the federal regulations do require the state of Missouri to do this, then we've got to go up to the next level. And if in fact they don't require it, he warns that the director should be on his toes, because he's gonna get it."

Dr. Olson remains optimistic. The first hearing on the case occurred in December 1987 and was continued to February 22, 1988. Dr. Olson maintains that his contentions are simple and defensible. He contends that Ozark Eye Surgeons is the only private medical office he can find who received the questionable survey and therefore, discriminated against. He further contends that Ozark Eye Surgeons has always accepted any patient who requested consultation. He stresses that by their nature as a private physician's office, they care for everyone without selection of any kind. His final contention is that although the DOSS suggests that the compliance steps are minimal, he sees all compliance steps as non-productive and inappropriate for an office that will see *any* patient requesting consultation.

"They (DOSS) are being very careful not to say that we've in any way discriminated against any person, which of course we haven't, and as far as I can tell, they have no way of proving we did," Dr. Olson says, "because they have never gotten out from behind a desk, or unless somebody has sent in a complaint which is totally unbeknownst to me."

"It's always hard to tell in a group whether you're being laughed at or with."
Rule Olson, M.D.

Dr. Olson says the support he has received from the Greene County Medical Society has been enthusiastic.

"As far as I can tell, it's always hard to tell in a group whether you're being laughed at or with, but the usual comment is 'by golly, where do I write for a form? I'm sure I'll flunk. Then I won't have to see anymore Medicaid patients.'"

He says he thinks that many of the statements are being made half in jest and half in earnest. But the encouragement he has received has been appreciated.

"Now whether they will maintain that enthusiasm, I can't tell you," he says.

At this point it is only a matter of time before some decision is reached. Dr. Olson hopes that this time the gavel will fall in the favor of the private physician. ■

Editor's note: *The author contacted DOSS on two occasions and they declined to comment on Dr. Olson's case due to the ongoing investigation.*

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Use in the Elderly May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, *e g.*, impaired kidney and/or liver function, concomitant use of other drugs. Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) or a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported. Make appropriate dosage adjustments for patients with impaired kidney function (see DOSAGE AND ADMINISTRATION).
Use in the Treatment of Pneumocystis Carinii *Pneumonitis in Patients with Acquired Immunodeficiency Syndrome (AIDS):* Because of unique immune dysfunction, AIDS patients may not tolerate or respond to Bactrim in same manner as non-AIDS patients. Incidence of side effects, particularly rash, fever, leukopenia, with Bactrim in AIDS patients treated for *Pneumocystis carinii* pneumonitis reported to be greatly increased compared with incidence normally associated with Bactrim in non-AIDS patients.
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Laboratory Tests: Perform complete blood counts frequently; if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.
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Carcinogenesis, Mutagenesis, Impairment of Fertility Carcinogenesis: Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim *Mutagenesis* Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination; concentrations used exceeded blood levels of these compounds following therapy with Bactrim Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. *Impairment of Fertility:* No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.
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Nursing Mothers. See CONTRAINDICATIONS section
Pediatric Use: Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections)
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Hematologic: Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia *Allergic Reactions.* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash Periarteritis nodosa and systemic lupus erythematosus have been reported *Gastrointestinal.* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia *Genitourinary:* Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria *Neurologic:* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache *Psychiatric:* Hallucinations, depression, apathy, nervousness *Endocrine:* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides *Musculoskeletal:* Arthralgia, myalgia *Miscellaneous:* Weakness, fatigue, insomnia
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MSMA
130th Annual Convention
March 17-20, 1988
Hyatt Regency Hotel, Kansas City
Preliminary Program

Scientific Program

(Listed alphabetically by sponsoring specialty)

ALLERGY

Saturday, March 19

9:00 a.m. Scientific Program
Greetings, Announcements and Introductions, Gerald S. Shatz, M.D., President
"Seminar on Flexible Rhinopharyngolaryngoscopy"
Speaker: Jerald Koepke, M.D., Allergy Respiratory Institute of Colorado, Denver
"Normal Anatomy of Upper Respiratory Tract"
"Diseases of Upper Respiratory Tract"
"Hands-on Demonstration of Rhinopharyngolaryngoscope"
Moderator: Gerald S. Shatz, M.D.
12:15 p.m. MSAA Luncheon
1:30 p.m. Scientific Program
"Allergenic Plants of Missouri"
Speaker: Walter Lewis, Ph.D., Washington University, St. Louis
"Common Dermatological Diseases"
Moderator: Gerald S. Shatz, M.D.
4:00 p.m. MSAA Business Meeting

Sponsored by the Missouri State Allergy Association

ANESTHESIOLOGY

Friday, March 18

6:30 p.m. MSA Cocktails and Dinner

Saturday, March 19

7:30 a.m. MSA Executive Committee Breakfast Meeting
8:00 a.m. MSA Continental Breakfast
8:30 a.m. Scientific Program
"Opiate Receptors: Current Concepts"
Speaker: Eugene E. Fibuch, M.D., St. Luke's Hospital, Kansas City
"Epidural Analgesia"
Speaker: Brian Ross, M.D., Ph.D., University of Washington School of Medicine, Seattle
"Chronic Pain Management and Management of the Cancer Patient"
Speaker: Terence Murphy, M.B., Ch.B., University of Washington School of Medicine, Seattle.
Moderator: Stephen Stoops, M.D., Kansas City
12:00 noon MSA Luncheon and Business Meeting
2:00 p.m. Scientific Program
"Analgesia for Labor and Delivery"
Speaker: Jay McNitt, M.D., St. Luke's Hospital, Kansas City
"Analgesia after Cesarean Section"
Speaker: Brian Ross, M.D., Ph.D., Seattle, Wash.
Moderator: Stephen Stoops, M.D., Kansas City

Sponsored by the Missouri Society of Anesthesiologists

DERMATOLOGY

Friday, March 18

12:00 noon MDSI Board of Directors Luncheon Meeting
1:00 p.m. Scientific Program
"Treatment of Leg Ulcers in the Office Setting"
Speaker: Joseph W. McGoey, M.D., Henry Ford Hospital, Detroit, Mich.
"Mini-Case Presentations"
Speaker: Philip Anderson, M.D., University of Missouri School of Medicine, Columbia
Moderator: John C. Hall, M.D., Kansas City
6:30 p.m. MDSI Cocktails and Dinner

Saturday, March 19

8:00 a.m. AAD Postgraduate Course

Sponsored by the American Academy of Dermatology

Sunday, March 20

9:30 a.m. Scientific Program
"Case Presentations," Truman Medical Center, Blue Clinic
"Discussion of Cases," University of Missouri-Kansas City School of Medicine, Theater A
11:30 a.m. General Membership meeting of the MDSI, UMKC School of Medicine, Theater A

Sponsored by the
Missouri Dermatological Society, Inc.

EMERGENCY PHYSICIANS

Saturday, March 19

9:00 a.m. Scientific Program
"AIDS in the Emergency Room"
Speaker: Roger A. Willcox, M.D., Boone Hospital Center, Columbia
10:00 a.m. Board of Directors Meeting

Sponsored by the Missouri Chapter,
American College of Emergency Physicians

FAMILY PHYSICIANS

Saturday, March 19

11:00 a.m. Scientific Program
"Role of HPV in the Development of Cervical Dysplasia and Carcinoma"
Speaker: Javier Magrina, M.D., Mayo Clinic, Scottsdale, Ariz.
Moderator: Monaford D. Durnell, M.D., Kansas City
1:30 p.m. Scientific Program
"Update on AIDS in Missouri"
"Considerations Regarding Reportable Diseases by Physicians in the State of Missouri"
Speaker: Robert G. Harmon, M.D., Director, Department of Health, Jefferson City
Moderator: Monaford D. Durnell, M.D., Kansas City

Sponsored by the Missouri Academy of
Family Physicians

INTERNAL MEDICINE

Saturday, March 19

11:00 a.m. Scientific Program
"PRO: Is It Worth the Hassle"
1:00 p.m. MSIM Business Meeting

Sponsored by the Missouri Society of
Internal Medicine

NEUROSURGERY

Saturday, March 19

12:00 noon MSNS Luncheon and Business Meeting

Sponsored by the Missouri State
Neurosurgical Society

OBSTETRICS-GYNECOLOGY

Saturday, March 19

8:30 a.m. Scientific Program
Welcome
David L. Gearhart, M.D., Vice Chairman, Missouri Section of ACOG, St. Louis
"New Developments in Basic Gynecologic Surgery: Wound Construction and Suture Selection"
Speaker: Byron Masterson, M.D., University of Florida College of Medicine, Gainesville
"The Role of the Obstetrician-Gynecologist in Diagnosis and Treatment of Benign and Malignant Diseases of the Breast"
Speaker: John Isaacs, M.D., Loyola University Medical Center, Chicago, Ill.
"Oscopy Update"
"Hysteroscopy — Laser, etc."
Speaker: Richard Gimpelson, M.D., St. Louis
"Colposcopy — HPV Patient Profile System, Method of Diagnosis, Treatment and Follow-up"
Speaker: George J. Fuchs, M.D., Ellis Fischel State Cancer Hospital, Columbia
Coordinator: Ernest Friedrich, M.D., St. Louis
12:00 noon Luncheon and Business Meeting
1:00 p.m. Scientific Program
"New Developments in Basic Gynecologic Surgery: Skin Preparation"
Speaker: Byron Masterson, M.D., Gainesville, Fla.
"The Treatment of Total Uterine Prolapse and Vaginal Vault Prolapse"
Speaker: John Isaacs, M.D., Chicago, Ill.
"Oscopy Update"
"Endoscopy under Volonelgesia"
"Laser — Laparoscopy"
Speaker: Elwyn M. Grimes, M.D., University of Missouri-Kansas City School of Medicine, Kansas City
"Stump the Professors"
Junior Fellows

Sponsored by the Missouri Section of the
American College of Obstetricians
and Gynecologists

OTOLARYNGOLOGY

Saturday, March 19

7:30 a.m. MSO/HNS Breakfast and Business Meeting
9:00 a.m. Scientific Program
"Otolaryngology — Neurosurgery Forum"
Introduction
Charles M. Luetje, M.D., Kansas City
"Indications and Surgical Techniques for Removal of Skull Base Tumors"
Speakers: Peter G. Smith, M.D., Ph.D., and Robert L. Grubb, Jr., M.D., Washington University School of Medicine, St. Louis

"Indications and Surgical Techniques for Removal of Acoustic Tumors and Other Posterior Fossa Tumors"
Speakers: C. Keith Whittaker, M.D., and Charles M. Luetje, M.D., University of Missouri-Kansas City School of Medicine, Kansas City
"Indications and Surgical Techniques for Anterior Facial-Cranial Injuries"
Speakers: Gregory Renner, M.D., and John Oro, M.D., University of Missouri-Columbia School of Medicine, Columbia
"Open Panel Discussion"
Guest Panelist: Gale Gardner, M.D., University of Tennessee School of Medicine, Memphis
Moderator: Bradley S. Thedinger, M.D., Prairie Village, Kan.
The discussion will involve each of the presenters, and their participation is not limited to discussion of their paper. The audience is invited to bring cases of interest they may wish to discuss with the panelists.

Sponsored by the Missouri Society of Otolaryngology/Head and Neck Surgery

PATHOLOGY

Friday, March 18

2:00 p.m. Scientific Program
"*Campylobacter pylori* and Its Significance"
Speaker: William Barnes, Ph.D., University of Missouri-Kansas City School of Medicine, Kansas City
"Evaluation of Sudden Death"
Speaker: John C. Overman, M.D., Kansas City
"Evaluating the Brain at Autopsy"
Speaker: Joseph C. Parker, Jr., M.D., Kansas City
"Recognizing Hemolytic Transfusion Reactions"
Speaker: Ms. Oksana Melnykovych, Truman Medical Center, Kansas City
6:00 p.m. MSP Cocktails and Dinner

Sponsored by the Missouri Society of Pathologists

PHYSICAL MEDICINE AND REHABILITATION

Saturday, March 19

9:00 a.m. Scientific Program
"Unusual Medical Complications in a Rehabilitation Setting for the Traumatically Brain Injured"
Speaker: Catherine Fay Bontke, M.D., The Institute for Rehabilitation and Research, Houston, Texas
12:00 noon Luncheon and Business Meeting

Sponsored by the Central Society of Rehabilitation Medicine

PLASTIC SURGERY

Friday, March 18

6:30 p.m. MSPSS Business Meeting

Sponsored by the Missouri State Plastic Surgery Society

PSYCHIATRY

Friday, March 18

1:00 p.m. Scientific Program
"The Plague of Alcoholism: What Can We Do About It?"
Panelists: Armando R. Favazza, M.D., University of Missouri-Columbia School of Medicine; Donald W. Goodwin, M.D., University of Kansas City School of Medicine, Kansas City, Kan.; Frances J. Joy, R.N., Mid-Missouri Mental Health Center, Columbia; and Charles B. Wilkinson, M.D., University of Missouri-Kansas City School of Medicine, Kansas City
Moderator: James M. A. Weiss, M.D., Columbia
3:00 p.m. MPA Business Meeting
6:30 p.m. MPA Cocktails and Dinner
"Drinking Writers: Booze and the Muse"
Speaker: Donald W. Goodwin, M.D., University of Kansas School of Medicine, Kansas City, Kan.

Sponsored by the Missouri Psychiatric Association

RADIOLOGY

Saturday, March 19

9:00 a.m. MRS Nominating Committee Breakfast Meeting
10:30 a.m. MRS Board of Directors Meeting
12:00 noon MRS Board of Directors Luncheon
1:00 p.m. MRS General Membership Meeting
2:00 p.m. Scientific Program
"CT vs. MRI: Applications and Limitations in Neuroradiology"
Speaker: Solomon Batnitzky, M.D., University of Kansas Medical Center, Kansas City, Kan.
"Comparison of MR and CT in the Evalution of Musculoskeletal Masses"
Speaker: Louis Wetzel, M.D., University of Kansas City Medical Center, Kansas City, Kan.
"RVS for Radiology"
7:00 p.m. MRS Cocktails and Dinner

Sponsored by the Missouri Radiological Society

SURGERY

Thursday, March 17

7:00 p.m. MSSS Board of Directors Cocktails and Dinner

Friday, March 18

1:30 p.m. Scientific Program
"Transplantation 1988"
Speaker: Paul Garvin, M.D., St. Louis University School of Medicine, St. Louis
"Current Status of Kidney Transplantation: Cadaver vs. Living Related Donors"
Speaker: Lawrence McBride, M.D., St. Louis University School of Medicine, St. Louis
"PRO and the Practice of Medicine"
Speaker: William D. Bradshaw, M.D., Jefferson City

Saturday, March 19

9:30 a.m. Scientific Program
"Vascular Section"
"Carotid Thromboendarterectomy 1988"
Speaker: Joseph Pinkerton, M.D., Kansas City
"Revascularization of Diabetic Patients with Threatened Limb Loss"
Speaker: Arthur Auer, M.D., St. John's Mercy Medical Center, St. Louis
"Management of Suprarenal Thoraco-abdominal Aortic Aneurysm"
Speaker: Joseph Graham, M.D., Joplin
Moderator: Joseph J. Hurley, M.D., St. Louis

Sponsored by the Missouri State Surgical Society

THORACIC

Friday, March 18

11:00 a.m. Annual Charles A. Brasher, M.D., Medical Lectureship
"Tuberculosis and the Primary Care Physician"
Speaker: Robert Green, M.D., University of Michigan School of Medicine, Ann Arbor

Sponsored by the Missouri Thoracic Society and the American Lung Associations of Eastern and Western Missouri

UROLOGY

Friday, March 18

11:00 a.m. Scientific Program
"Transrectal Ultrasonography of the Prostate"
Speaker: Gary Leifer, M.D., Urology Center of Kansas City, Inc., Kansas City
"Ureteroscopy"
Speaker: Floyd J. Freiden, M.D., Urology Center of Kansas City, Inc., Kansas City
Moderator: Jay L. Milne, M.D., Springfield
1:30 p.m. Scientific Program
"Treatment of Male Erectile Dysfunction"
Speaker: Robert L. Elkins, M.D., Urology Center of Kansas City, Inc., Kansas City
Moderator: Jay L. Milne, M.D., Springfield
2:30 p.m. MUS Business Meeting

Sponsored by the Missouri Urological Society

ANNUAL MEETINGS & EVENTS

Thursday, March 17

12:00 noon Metropolitan Medical Society of Greater Kansas City Luncheon
12:00 noon St. Louis Metropolitan Medical Society Luncheon

Friday, March 18

7:00 a.m. MSMA Councilor District Breakfasts
Districts 1, 4, 5, 6, 8, 9, 10
8:00 a.m. Missouri University Board of Directors Breakfast and Meeting
12:00 noon Metropolitan Medical Society of Greater Kansas City Luncheon
12:30 p.m. Student Delegates Luncheon
12:30 p.m. Missouri University Medical Alumni Luncheon
2:00 p.m. St. Louis Metropolitan Medical Society Caucus
2:30 p.m.-4:00 p.m. Missouri State Medical Foundation Annual Meeting
6:00 p.m.-7:00 p.m. Missouri University Medical Alumni Reception
6:00 p.m.-7:00 p.m. St. Louis University Medical Alumni Reception
6:00 p.m.-7:00 p.m. Washington University Medical Alumni Reception

Saturday, March 19

1:30 p.m. Missouri Medical Political Action Committee Meeting

HOUSE OF DELEGATES

Thursday, March 17

10:00 a.m. Opening Session
Presiding, Arlen D. Winsky, M.D., Springfield, Speaker
Reports of Officers
Reports of Committees and Commissions
President's Message
1:30 p.m. Reference Committee Meetings

Friday, March 18

4:00 p.m. Second Session
Report of the Nominating Committee
Reports of Reference Committees
Report of the Council

Sunday, March 20

7:30 a.m. Final Session, Breakfast Meeting
Election of Officers
Report of Election of Councilors
Reports of Reference Committees
Installation of Officers
Appointment of Committee & Commission Members

Registration of Delegates opens at 8:00 a.m. in the Main Lobby on Thursday, Friday, and Saturday.

AFFILIATED ANNUAL PROGRAM EVENTS

CANCER

Friday, March 18

11:00 a.m. Scientific Program
"Melanoma: Prevention, Early Detection, Screening, and Management"
"Prevention, Early Detection, and Screening"
"Pathological Staging"
Moderator: Richard A. Heimburger, M.D., Columbia
2:00 p.m. Scientific Program
"Melanoma: Prevention, Early Detection, Screening, and Management"
"Surgical Treatment"
"New Treatment Concepts"
Moderator: Frederick I. Volini, M.D., Jefferson City

Sponsored by the American Cancer Society, Missouri Division, Inc., in cooperation with St. Louis University School of Medicine, Departments of Surgery and Pathology

Saturday, March 19

1:30 p.m. Scientific Program
"Human Papilloma Virus (HPVI) and Cervical Cancer: A Need for Annual Pap Smears"
Speaker: Javier Magrina, M.D., Scottsdale, Ariz.
"Changes in ACS Checkup Guidelines for Cervical Cancer Detection"
Speaker: Diane Fink, M.D., National American Cancer Society, New York, NY
Moderator: Andrew E. Galakatos, M.D., Chesterfield

Sponsored by the American Cancer Society, Missouri Division, Inc.

WOMEN PHYSICIANS

Saturday, March 19

12:00 noon AMWA Luncheon

Sponsored by the American Medical Women's Association

PHYSICIAN REHABILITATION

Saturday, March 19

11:00 a.m. Program
"Malpractice Stress Syndrome"
Speaker: Ed Redding, Medical Society of New Jersey

Sponsored by the MSMA-MAOPS Physician Rehabilitation Committee

SPECIAL EVENTS

Thursday, March 17

6:00 p.m. MSMA Auxiliary Fundraiser to benefit the Missouri State Medical Foundation and AMA Education and Research Fund.

Friday, March 18

9:00 a.m. General Session
"Death and Dying — The Ethical Issues"

A nationally recognized panel of experts debates the ethics surrounding the use, or non-use, of today's medical technology in sustaining life. When does life end? Who can pull the plug?

Be on hand to participate in this challenging, thought-provoking exchange featuring:

- The Rev. Kevin O'Rourke, O.P.
  Director, Center for Health Care Ethics, St. Louis University
- Russell Patterson, M.D.
  Vice Chairman, AMA Judicial Council
- Susan Wolf, J.D.
  Attorney, the Hastings Center

Saturday, March 19

7:30 a.m. MSMA Auxiliary Public Affairs Breakfast
9:30 a.m. Discuss the Issues With Your AMA Delegates
6:00 p.m. Presidential Inauguration
7:00 p.m. MSMA Reception

Children's Hospital

At Washington University Medical Center

ST. LOUIS, MISSOURI
PROGRESS IN CLINICAL PEDIATRICS IV
MAY 20-21, 1988

FRIDAY A.M. ★ ADVANCES IN HEMATOLOGY AND ONCOLOGY

Enjoy face-to-face presentations by Washington University Medical School faculty & Children's Hospital physicians. Participate in discussions of important topics in hematology and oncology. Emphasis is on the relevance of these subjects to the care of your pediatric and adolescent patients.

FRIDAY P.M. ★ "HANDS ON" WORKSHOP ★ AND OTHERS

Choices will include:

★ Adolescent OB/GYN ★ Cardiology ★ Dermatology ★ Pulmonary Function Studies
★ ENT ★ Ophthalmology ★ "Puzzlers" Case Studies

FRIDAY EVENING

★ Evening on the Town ★ Cardinal Baseball ★ Visit the Riverfront

SATURDAY A.M. ★ TRANSPLANTATION IN CHILDREN: THE STATE OF THE ART

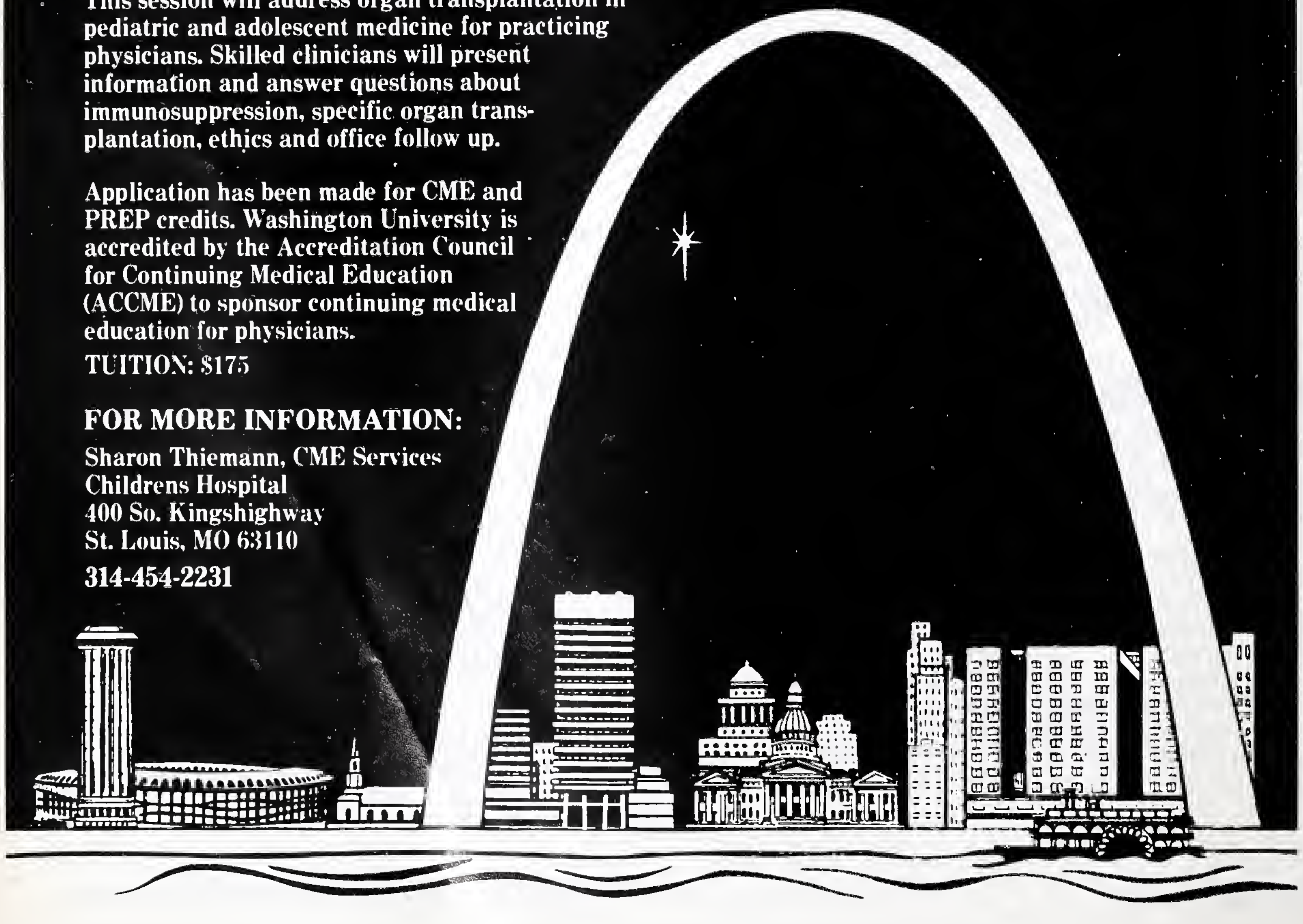
This session will address organ transplantation in pediatric and adolescent medicine for practicing physicians. Skilled clinicians will present information and answer questions about immunosuppression, specific organ transplantation, ethics and office follow up.

Application has been made for CME and PREP credits. Washington University is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.

TUITION: $175

FOR MORE INFORMATION:

Sharon Thiemann, CME Services
Childrens Hospital
400 So. Kingshighway
St. Louis, MO 63110
314-454-2231



FINANCIAL STATEMENT FOR THE YEAR 1987

WILLIAMS-KEEPERS
CERTIFIED PUBLIC ACCOUNTANTS
107 Adams Street
Jefferson City Missouri 65101
314 635-6196

"In Business To Serve Your Needs"

To the Council of
the Missouri State Medical Association:

We have examined the accompanying balance sheets of the Missouri State Medical Association as of December 31, 1987 and 1986, and the related statements of revenues and expenses and changes in members' equity for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We did not examine the financial statements of Missouri Medical Insurance Company, an unconsolidated affiliate, the investment in which, as discussed in Note 5 of the Notes to Financial Statements, is accounted for by the equity method of accounting. The investment in Missouri Medical Insurance Company represents -0-% and 19% of the assets as of December 31, 1987 and 1986, respectively. The financial statements of Missouri Medical Insurance Company for 1986 and 1985 (latest available reports) were examined by other auditors whose reports have been furnished to us, and our opinion expressed herein, in so far as it relates to the amounts included for Missouri State Medical Association, is based solely on the reports of the other auditors.

The opinion of the other auditors, referred to in the preceding paragraph, was qualified subject to their inability to evaluate the reasonableness of the estimated reserve for losses and loss adjustment expenses due to the insufficient historical claims experience of the Missouri Medical Insurance Company. Additional losses ultimately realized, if any, will affect the carrying value of the Association's investment in the Missouri Medical Insurance Company.

In our opinion, based on our examinations and the reports of the other auditors referred to above, and subject to the effects, if any, on the financial statements of the ultimate resolution of the matter referred to in the preceding paragraph, the financial statements referred to in the first paragraph present fairly the financial position of Missouri State Medical Association as of December 31, 1987 and 1986, and the results of their operation for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

The schedule of selected expenses for the years ended December 31, 1987 and 1986 is presented for purposes of additional analysis and is not a required part of the basic financial statements. Our examinations of the basic financial statements were made for the purpose of forming an opinion on those statements taken as a whole. The accompanying financial information has been subjected to the auditing procedures applied in the examinations of the basic financial statements and, in our opinion, the accompanying information is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

BALANCE SHEETS
December 31, 1987 and 1986

ASSETS	1987	1986
CURRENT ASSETS		
Cash and cash investments (Note 2)	$ 893,048	$ 730,032
Marketable securities (Note 3)	219,711	186,676
Accounts receivable	24,958	13,824
Other receivables (Note 11)	-0-	5,173
Other current assets	6,581	6,896
Total current assets	1,144,298	942,601
INVESTMENTS AND LONG-TERM RECEIVABLE		
Common stock of MSMI, Inc., a 100% owned unconsolidated subsidiary, at cost plus equity in undistributed net income (Note 4)	22,483	20,478
Common stock of Missouri Medical Insurance Company, a 10.8% owned affiliate, at cost plus equity in undistributed net income (Note 5)	-0-	322,775
Note receivable from affiliate (Note 6)	100,000	100,000
Total investments and long-term receivables	122,483	443,253
LAND, BUILDING AND EQUIPMENT (Note 7)	273,032	297,325
OTHER ASSET, cash surrender value (Note 15)	25,182	19,443
	$1,564,995	$1,702,622

LIABILITIES AND MEMBERS' EQUITY	1987	1986
CURRENT LIABILITIES		
Accounts payable and accrued expense	$ 12,002	$ 2,767
Due to the American Medical Association	99,086	232,101
Due to County Medical Societies	13,751	12,959
Deferred revenue	130,700	260,027
Total current liabilities	255,539	507,854
SUBORDINATED NOTES PAYABLE (Note 8)	590,781	590,781
DEFERRED COMPENSATION (Notes 9 and 15)	30,457	25,091
Total liabilities	876,777	1,123,726
MEMBERS' EQUITY (Note 15)	688,218	578,896
	$1,564,995	$1,702,622

STATEMENTS OF REVENUES AND EXPENSES
Years Ended December 31, 1987 and 1986

	1987	1986
REVENUES		
Dues	$1,307,236	$ 695,727
Subscriptions	20,856	18,814
Exhibit rentals	18,000	13,800
Advertising	72,835	67,981
Commissions on collections	23,134	23,368
Investment income (Note 10)	50,818	86,351
Administrative fees and office rent (Note 11)	38,288	36,282
Seminars and workshops	46,183	41,350
Physicians Rehabilitation Program (Note 12)	120,061	7,950
Other revenue	7,082	11,963
Total revenues	1,704,493	1,003,586
EXPENSES		
Salaries and fringe benefits (Note 13)	441,921	420,564
Office expense	80,271	85,447
Interest expense	-0-	8,740
Travel expense	6,741	6,678
Commissions and committees expense	22,532	3,418
Depreciation	36,274	35,436
Womens Auxiliary	8,417	7,277
Journal expense	133,356	132,054
Meeting expense	169,570	157,092
Public affairs	40,504	26,191
Telenet system	3,002	5,997
Consultant and professional fees	40,580	32,183
Public relations program	18,604	4,575
Student awards	1,200	1,200
Tort Reform	20,740	25,771
Miscellaneous	19,054	7,977
Seminars and workshops	37,232	34,966
Physicians Rehabilitation Program (Note 12)	132,652	38,130
Contribution to the Missouri State Medical Foundation (Note 11)	25,000	-0-
HMO feasability study	37,836	-0-
Equipment purchases	3,189	2,073
Planning and remodeling	7,707	-0-
	1,286,382	1,035,769
Less capitalized expenditures	(11,981)	(2,073)
Total expenses	1,274,401	1,033,696

MISSOURI STATE MEDICAL ASSOCIATION

STATEMENTS OF REVENUES AND EXPENSES
Years Ended December 31, 1987 and 1986

	1987	1986
Excess (deficiency) of revenues over expenses before equity in net income of investments	$ 430,092	$ (30,110)
Equity in net income (loss) of MSMI, Inc. (Note 4)	2,005	(1,371)
Equity in net (loss) of Missouri Medical Insurance Company (Note 5)	(322,775)	-0-
Excess (deficiency) of revenues over expenses	$ 109,322	$ (31,481)

The Notes to Financial Statements are an integral part of these statements.

STATEMENTS OF CHANGES IN MEMBERS' EQUITY
Years Ended December 31, 1987 and 1986

	1987	1986
Members equity, beginning, as previously reported	$578,896	$616,487
Adjustments applicable to prior years (Note 15)	-0-	(6,110)
Members' equity, beginning as restated	578,896	610,377
Excess (deficiency) of revenues over expenses	109,322	(31,481)
Members' equity, ending	$688,218	$578,896

NOTES TO FINANCIAL STATEMENTS

Note 1. Significant Accounting Policies

Dues:

Dues are assessed to members on a calendar year basis. On December 31 of each year, members delinquent in payment of dues forfeit their memberships. The Association may also collect from members, dues and assessments of the American Medical Association and County Medical Societies, which are then forwarded to the respective organizations by the Association. The Association receives a fee for providing this service. Amounts received from members prior to January 1 of each year, which represents the subsequent years dues are recorded as deferred revenue.

Valuation of accounts receivable:

Accounts receivable are stated at face amount with no allowance for doubtful accounts. An allowance for doubtful accounts is not considered necessary because probable uncollectible accounts are immaterial.

Income taxes:

The Association is exempt from federal income taxes under the Internal Revenue Code Section 501(c)(6). Any unrelated business income is subject to income tax.

Property and equipment:

Property and equipment are carried at cost. Depreciation is computed by the straight-line method based on estimated useful lives of the related assets.

Reclassifications:

Certain reclassifications have been made to conform to the 1987 presentation.

Note 2. Cash and Cash Investments

The balance of cash and cash investments consisted of the following at December 31:

	1987	1986
Petty cash	$ 50	$ 50
Cash in bank, Executive Secretary Account	1,131	1,775
Cash in bank, Treasury Account	214,067	344
Cash in bank, Physicians Rehabilitation Program	3,497	1,550
Money Market Fund	103,443	51,245
Certificates of deposit	570,860	675,068
	$893,048	$730,032

Note 3. Marketable Securities

Investments in marketable equity securities are carried at the lower of aggregate cost or market at the balance sheet date.

To reduce the carrying amount of the marketable equity securities portfolio to aggregate market, which was lower than aggregate cost at December 31, 1987, a valuation allowance in the amount of $31,747 was established with a corresponding charge to income at that date.

The following is a summary of marketable equity securities at December 31:

	1987	1986
Aggregate cost	$251,458	$186,676
Aggregate market	219,711	186,954
Unrealized gain (loss)	(31,747)	278
Valuation allowance, beginning	-0-	-0-
Charge (credit) to operations	31,747	-0-
Valuation allowance, ending	31,747	-0-

Net realized gains of $16 and $17,766 on the sale of marketable equity securities were included in revenue for the years ended December 31, 1987 and 1986, respectively.

Note 4. Investment in Unconsolidated Subsidiary

The Association's investment in MSMI, Inc., a 100% owned unconsolidated subsidiary, is carried at cost ($2,000) plus equity in the undistributed net earnings since the date of acquisition. At December 31, 1987 and 1986, the investment in the subsidiary is carried at $22,483 and $20,478, respectively.

Condensed financial data relating to the subsidiary follows:

For the Years Ended December 31

	1987	1986
Net current assets	$ 7,943	$ 8,478
Other assets (investment in common stock of Missouri Medical Insurance Company)	15,000	15,000
Less liabilities	(460)	(3,000)
Net assets	$ 22,483	$ 20,478
Income	$ 4,679	$ 3,137
Expenses	(2,214)	(5,676)
	2,465	(2,539)
Income taxes	(460)	(1,168)
Net income (loss)	$ 2,005	$ (1,371)
Dividends paid to the Association	$ -0-	$ 25,000

Note 5. Investment in Affiliate

The Association exercises significant management control over its affiliate, Missouri Medical Insurance Company (MOMEDICO), by virtue of its ownership of 61.3% of the voting rights of the Company. At December 31, 1986 and 1985, the Association owned 10.8% of the outstanding common stock of its affiliate. The Association's investment in MOMEDICO is carried at cost, plus equity in undistributed net earnings since the date of acquisition. At December 31, 1987 and 1986, the investment in the affiliate is carried at $-0- and $322,775, respectively.

Condensed financial data relating to the affiliate follows:

For the Years Ended December 31

	1986	1985
Investments	$21,152,253	$18,776,187
Other assets	1,369,748	1,511,361
Total assets	22,522,001	20,287,548
Reserve for losses and loss adjustment expenses	20,993,288	14,801,330
Other liabilities	4,011,562	3,985,413
Total liabilities	25,004,850	18,786,743
Revenues	8,683,547	6,755,213
Expenses	12,827,224	7,282,896
	(4,143,677)	(527,683)
Realized gains (losses) on investments	160,023	527,683
Net income (loss)	$(3,983,654)	$ -0-

Note 6. Note Receivable From Affiliate

On July 10, 1985, the Association advanced $100,000 to its affiliate, MOMEDICO and received an unsecured convertible subordinated note in the principal sum of $100,000. The note bears simple interest at a rate of 10% per annum to be paid annually upon approval of the Missouri Division of Insurance.

Repayment of the note will be made in 1988 if MOMEDICO, as calculated at June 30, 1988 and in accordance with accounting principles prescribed or permitted by the Division of Insurance of the State of Missouri, has a minimum capital and surplus of $2,000,000. Principal payments on the outstanding notes will be made only to the extent that the capital and surplus exceeds the $2,000,000 minimum. At this time, the Association has the option of accepting one share of Class B, common stock for each $25 of principal and interest due and payable. However, MOMEDICO may decline such a conversion in the event that less than 100,000 shares are requested for conversion by note holders. Payments thereafter on nonconverted notes will only be to the extent that the capital and surplus of MOMEDICO, calculated as previously disclosed and at the end of each fiscal year, exceeds the $2,000,000 minimum.

Note 7. Land, Building and Equipment

Land, building and equipment consists of the following at December 31:

	1987	1986
Land	$ 83,000	$ 83,000
Buildings	238,355	230,648
Furniture and equipment	165,541	161,267
	486,896	474,915
Less accumulated depreciation	213,864	177,590
	$273,032	$297,325

Note 8. Subordinated Notes Payable

In 1978, the Association formed a wholly owned subsidiary, MOMEDICO to provide professional liability and premises liability insurance for physicians and support technicians practicing in the State of Missouri. Before obtaining professional liability insurance through MOMEDICO, physicians residing in the State of Missouri were required to subscribe to non-interest bearing subordinated notes based upon the physician's underwriting classification. These notes were issued by the Association and the subscriptions were payable over a three year period.

The Association was the sole stockholder of MOMEDICO prior to the public stock offering of MOMEDICO in 1980. At that time, the requirement to purchase subordinated notes was eliminated with new policies effective after January 31, 1980.

In connection with the public stock offering in 1980, MOMEDICO assumed, in exchange for 100,815 of the 125,000 shares of the Class B common stock the Association held in MOMEDICO, the face value of the subordinated notes issued and outstanding. MOMEDICO also assumed the balance of the installments receivable on the subordinated notes and a bank note payable from the Association. Under an exchange offer made by MOMEDICO, holders of the Association's subordinated notes could exchange fully paid notes for Class A common stock at the rate of $20 face value per share.

On October 15, 1980, the Association reassumed all notes not exchanged and also the installments receivable on the unexchanged notes as well as an amount equal to the installments receivable of the bank note payable.

The notes require repayment only upon the Association's accumulation of in excess of $3,000,000 of members' equity at the end of any calendar year, that the Association has sufficient funds and assets, exclusive of the amount subject to repayment, to permit it to carry on business, and that the repayment be approved by the Council of the Association. Interest may be paid on the notes, but it is at the discretion of the Council of the Association.

Redemption of the notes are provided for in the event of death, disability, retirement of the holder, or if the holder has moved both his person and his practice out of the State of Missouri. However, redemption for such causes may be delayed or refused if the Council determines the Association is not on a financially responsible basis to make such redemptions.

At December 31, 1987 and 1986, the balance of the subordinated notes payable was $590,781. This amount reflects the face value of the notes reassumed by the Association on October 15, 1980, less the installments receivable on the outstanding notes, and less all redemptions made from 1981 through 1985. In 1985, the Council of the Association placed a moratorium on the redemption of the subordinated notes.

Note 9. Deferred Compensation Plan

The Association has a deferred compensation plan agreement with its Executive Vice-President providing for payments upon retirement, death or disability. The plan agreement also stipulates that a pro-rata settlement of benefits will be made in the event of voluntary termination of employment with the Association.

At December 31, 1987 and 1986, the Association's liability under the terms of the plan were $30,457 and $25,091, respectively.

Note 10. Investment Income

The following is a summary of investment income for the years ended December 31:

	1987	1986
Interest on cash investments	$ 60,682	$ 45,470
Interest on notes receivable	10,000	14,750
Dividends	11,867	8,365
Realized gain on the sale of marketable equity securities	16	17,766
Unrealized loss on the valuation of marketable equity securities	(31,747)	-0-
Total	$ 50,818	$ 86,351

Note 11. Related Party Transactions

The Association provides administrative services to MSMI, Inc. (a wholly owned subsidiary) and Missouri State Medical Foundation (an affiliate). For providing these services, the Association receives an annual fee from each of the two organizations. For the years ended December 31, 1987 and 1986, the administrative fee assessed Missouri State Medical Foundation was $10,000 each year and the administrative fee assessed MSMI, Inc. was $1,000 and $3,000, respectively. The administrative fee assessed MSMI, Inc. for 1986 was outstanding at December 31, 1986.

The Association may also, at times, pay expenses on behalf of its affiliate, the Missouri State Medical Foundation (Foundation). These amounts are later reimbursed to the Association. For the year ended December 31, 1987, the Association was reimbursed $5,587 for such expenses.

For the year ended December 31, 1986, the Association was reimbursed $11,213 and had an additional amount due of $2,173 from the Foundation for reimbursement of expenses.

The Association also collected and remitted to the Foundation, an annual assessment on the members of the Association. For the year ended December 31, 1986, the Association collected and remitted to the Foundation $47,290 representing the assessment on the 1986 dues received by the Association. This assessment was discontinued after 1986, but the Association continued its financial support of the Foundation by contributing $25,000 to the Foundation in 1987.

The Association during 1987 and 1986, also provided office space, office furniture and office services for its affiliate, MOMEDICO. In exchange for providing these services, the Association assesses a monthly fee. For the years ended December 31, 1987 and 1986 these fees were $15,900.

Note 12. Physicians Rehabilitation Program

During 1986, the Association established a Physician Rehabilitation Program (PRP), the purpose of which is to motivate impaired physicians to voluntarily enter treatment and to provide such a treatment program.

Funding for the program is to be provided by fees assessed to participants as well as from donations received from supportive individuals and organizations.

The following is a summary of the program's revenue and expenses for the year ended December 31, 1987.

Revenue:	
Participant fees	$ 50,186
Donations	69,875
Total revenues	$120,061
Expenses:	
Medical director - contracted salary	$ 50,000
Salary - coordinator and administrative assistant	19,906
Office expense	13,380
Secretarial services and office supplies	4,834
Publications	1,043
Travel	17,888
Legal and consulting fees	1,801
PRP committee	913
Educational/activities	753
Facility expense	1,100
Lab fees	7,980
Counselor services	13,054
Total expenses	$132,652

Note 13. Pension Plan

The Association has a non-contributory defined benefit pension plan covering substantially all of its employees. As of April 1, 1987, the Plan was fully funded with no unfunded accrued liability.

A comparison of the actuarial present value of accumulated plan benefits and net assets available for benefits for the plan year ended April 1, is as follows:

Actuarial present value of accumulated plan benefits:

	1985	1984
Vested	$294,733	$138,529
Nonvested	2,025	367
Total	296,758	138,896
Net assets available for benefits	385,302	359,497

The average assumed rate of return used in determining the actuarial present value of accumulated plan benefits was 8% for both 1985 and 1984.

At April 1, 1986, the net assets available for benefits was $473,420. The actuarial present value of accumulated plan benefits at April 1, 1986 was not available.

The total pension contributions for years ended December 31, 1987 and 1986 were $-0- and $20,000, respectively.

Note 14. Income Taxes

The Internal Revenue Service is currently performing an examination of the Associations' returns filed for the year ended December 31, 1983. At this time, the results of the examination and any possible effects to the Associations' tax exempt status are not known.

Note 15. Prior Period Adjustment

Errors were discovered in the Association's 1986 financial statements. The errors consisted of certain omissions relating to the life insurance policy owned by the Association and a deferred compensation agreement the Association has with the Executive Vice-President. These financial statements reflect the corrections, the results of which increased the total assets by $19,443, increased the total liabilities by $25,091 and decreased the expenses by $462 for the year ended December 31, 1986, as well as decreasing the balance of members' equity at January 1, 1985 by $6,110.

SCHEDULES OF SELECTED EXPENSES
December 31, 1987 and 1986

	1987	1986
SALARIES AND FRINGE BENEFITS		
Salaries	$378,425	$342,578
Payroll taxes	28,097	24,286
Employees life and disability insurance	6,772	6,091
Employees hospitalization insurance	23,261	22,424
Employees pension plan contribution	-0-	20,000
Deferred compensation expense	5,366	5,185
Total salaries and fringe benefits	$441,921	$420,564
OFFICE EXPENSES		
Occupancy expense	$ 10,518	$ 11,983
Office supplies	13,997	13,380
Computer expense	10,724	13,482
Postage	16,862	23,081

SCHEDULES OF SELECTED EXPENSES
December 31, 1987 and 1986

	1987	1986
Telephone	10,604	11,848
Insurance	5,771	3,658
Taxes, real estate	1,940	2,109
Custodian fees	2,602	1,125
Equipment rental and repair	3,490	2,187
Dues and directories	3,763	2,594
Total office expenses	$ 80,271	$ 85,447

	1987	1986
COMMISSIONS AND COMMITTEES EXPENSES		
Commissions:		
Commission on Medical Economics, Third Party Medicine and Governmental Relations	$ 178	$ 1,691
Commission on Continuing Medical Education	1,639	1,577
Commission on Medical - Legal Affairs	113	78
Total commissions expenses	1,930	3,346
Committees:		
Committee on Public Affairs	209	72
Committee on Planning	20,393	-0-
Total committee expenses	20,602	72
Total commissions and committee expenses	$ 22,532	$ 3,418

	1987	1986
Meeting Expenses:		
Annual session	$ 76,328	$ 54,443
Council	40,227	37,404
AMA delegate's expenses	43,296	63,695
Discretionary Council Fund	1,923	1,550
Hospital medical staff meetings	7,796	-0-
Total meeting expenses	$169,570	$157,092

MISSOURI STATE MEDICAL FOUNDATION
DECEMBER 31, 1987

To the Board of Directors of
Missouri State Medical Foundation

We have examined the accompanying statements of assets and fund balance on a modified cash basis of Missouri State Medical Foundation as of December 31, 1987 and 1986, and the related statements of revenues, expenses and changes in fund balance on a modified cash basis for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As described in Note 1 of the notes to financial statements, the accompanying statements are prepared on the modified cash basis of accounting and, accordingly, are not intended to be presented in conformity with generally accepted accounting principles.

In our opinion, the financial statements mentioned above present fairly the assets and fund balance of the Missouri State Medical Foundation as of December 31, 1987 and 1986, and its revenues, expenses and changes in fund balances for the years then ended, in conformity with the Foundation's modified cash basis accounting policy, as described in Note 1 of the notes to financial statements, applied on a consistent basis.

STATEMENTS OF ASSETS AND FUND BALANCE
(Modified Cash Basis)
December 31, 1987 and 1986

ASSETS	1987	1986
Cash	$ 479,175	$ 308,818
Loans receivable, less allowance for doubtful accounts of $40,807 and $41,630 (Note 2)	1,319,429	1,346,068
Equipment, less accumulated depreciation of $2,551 and $1,276	3,827	5,103
	$1,802,431	$1,659,989
FUND BALANCE	$1,802,431	$1,659,989

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN FUND BALANCE
(Modified Cash Basis)
Years Ended December 31, 1987 and 1986

	1987	1986
REVENUES		
Interest on student loans	$ 101,830	$ 91,035
Interest on cash investments	22,764	18,340
Contributions (Note 3)	32,567	8,083
Assessment of Missouri State Medical Association's Members (Note 3)	-0-	47,290
Other	1,699	-0-
Total revenues	158,860	164,748
EXPENSES		
Administrative (Note 3)	10,000	10,216
Professional (Note 3)	2,692	10,377
Printing and meeting expense (Note 3)	3,037	836
Provision for loan losses (Note 2)	(783)	4,447
Miscellaneous	197	54
Depreciation	1,275	1,276
Total expenses	16,418	27,206
Excess revenues over expenses	142,442	137,542
Fund balance, beginning	1,659,989	1,522,447
Fund balance, ending	$1,802,431	$1,659,989

NOTES TO FINANCIAL STATEMENTS

Note 1. Significant Accounting Policies

Method of accounting:

The accounts are maintained and these statements are presented, on a modified cash basis under which, except for the recognition of the assets and liabilities shown on the statement of assets, liabilities and fund balance on a modified cash basis, only cash receipts and disbursements are recorded and reflected in these statements. Since accrued interest on loans receivable and receivables which may be material in amount, are not reflected, the financial statements are not intended to present the overall financial position and results of operations in conformity with generally accepted accounting principles. However, the individual assets shown are presented in accordance with generally accepted accounting principles.

Loans receivable:

Loans receivable are stated at face amount with an allowance for doubtful accounts computed as 3 percent of the balance of the loans receivable at year end.

Tax status:

The Foundation is a not-for-profit organization exempt from federal income taxes under Internal Revenue Code Section 501(c)(3).

Equipment:

Equipment is carried at cost. Depreciation is computed by the straight-line method based on the estimated useful life of the asset.

Note 2. Loans Receivable

The Foundation grants low interest loans in multiples of $500 per year for medical students. The following is a summary of the transactions affecting the loans receivable account for the years ended December 31, 1987 and 1986:

	1987		1986	
Loans receivable at January 1	$	$1,387,698	$	$1,315,979
Add loans advanced	154,500		200,000	
Less:				
Principal repayments	(181,922)		(125,985)	
Loans written off	(40)	(27,462)	(2,296)	71,719
		1,360,236		1,387,698
Allowance for doubtful accounts at January 1	(41,630)		(39,479)	
Current year provision for doubtful accounts	783		(4,447)	
Current year loans written off	40	(40,807)	2,296	(41,630)
		$1,319,429		$1,346,068

Note 3. Related Party Transactions

The Foundation received funds through an assessment on the members of the Missouri State Medical Association. This fee was collected by the Missouri State Medical Association and remitted to the Foundation. For the year ended December 31, 1986, the Foundation received $47,290 from the Missouri State Medical Association, representing the 1986 fees. This assessment was discontinued after 1986.

In 1987, the Missouri State Medical Association continued its financial support of the Foundation by contributing $25,000 to the Foundation.

The Foundation is also assessed by the Missouri State Medical Association an annual fee for administrative cost. For each year ended December 31, 1987 and 1986, the Foundation paid the Association $10,000 for administrative cost. The Foundation also reimburses the Missouri State Medical Association for expenses paid by the Association on behalf of the Foundation. These reimbursements for the years ended December 31, 1987 and 1986 were $2,551 and $10,377 for professional fees and $3,036 and $836 for printing and meeting expenses.

Penicillinase-Producing *Neisseria gonorrhoeae*, Kansas City

Mark Aubin, B.S., Alfredia Weaver, B.S., Gerald L. Hoff, Ph.D., and Richard Biery, M.D.
Kansas City, Missouri

An outbreak of penicillinase-producing *Neisseria gonorrhoeae* in Kansas City has resulted in the city's being considered an endemic area for the disease. As a result, non-penicillin therapy is now recommended for all patients with gonorrhea and their contacts.

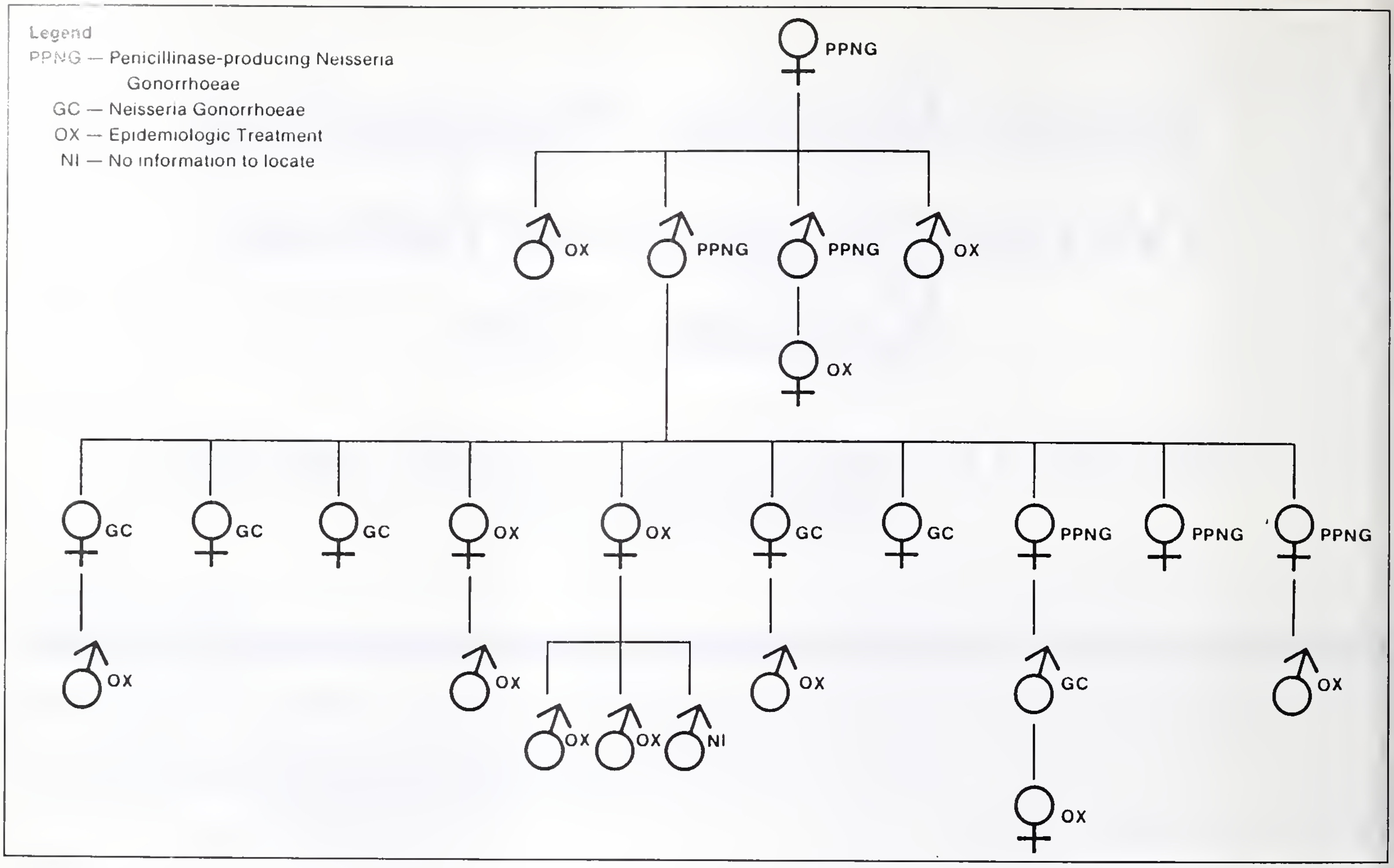
Penicillinase producing *Neisseria gonorrhoeae* (PPNG) are gonococcal bacterial strains which synthesize beta-lactamase, an enzyme that renders penicillin ineffective in the treatment of gonorrhea. Many PPNG strains also exhibit resistance to tetracycline.[1] While most strains of *N. gonorrhoeae* are susceptible to a broad range of antimicrobial agents, resistance to penicillin is a rapidly growing problem. Since PPNG was first recognized in the United States in 1976, isolates have been reported from all 50 states, with more than 70% of PPNG infections being observed in New York City, Los Angeles, and Florida.[2] In 1986, a total of 16,554 cases were reported to the Centers for Disease Control.[3]

PPNG was first reported in Missouri in 1977. Subsequent cases have been recognized as sporadic incidents involving importations into the major urban centers and military bases.[3] These incidents have responded to intensive disease prevention techniques, eliminating PPNG from the community. However, in November 1986, an outbreak of PPNG began in Kansas City which has persisted through the end of December 1987, with 186 cases recognized. Actually, the outbreak can best be described as a series of mini-outbreaks caused by importations plus a low level of endemic disease. Under Centers for Disease Control categorization, Kansas City now is considered an endemic area for PPNG. This designation dictates a shift to non-penicillin antimicrobial therapy for all gonorrhea cases and contacts, whether or not the infection is caused by a PPNG strain. Recommended treatment is either 2 gm spectinomycin or 250 mg ceftriaxone intramuscularly.[1, 4, 5] In addition, persons treated for gonorrhea should receive one week of tetracycline or erythromycin therapy for the co-treatment of chlamydial infection.[6]

In examining the antimicrobial susceptibility patterns during these mini-outbreaks, it became apparent that some PPNG appear to lose the ability for beta-lactamase production. A review of the literature since 1984 using Medline (National Library of Medicine) failed to reveal any reports of this phenomenon. The present report discusses this observation in two PPNG mini-outbreaks, one in December 1986, and one in April 1986. These two incidents represented 19 cases of PPNG, or 41% of the cases diagnosed during the year and had no persons in common.

Case Study

The April incident involved six cases of PPNG (Figure). The index case was a woman who acquired her infection in Germany. She infected two men, one of whom subsequently infected eight women. Cultures taken from three of these women yielded PPNG, and the remaining five had non-PPNG infections. One of the non-PPNG cases transmitted non-PPNG to another male partner. In addition, 13 other persons (8 men, 5 women) were prophylactically treated for


Legend
PPNG — Penicillinase-producing Neisseria Gonorrhoeae
GC — Neisseria Gonorrhoeae
OX — Epidemiologic Treatment
NI — No information to locate
PPNG
OX
PPNG
PPNG
OX
OX
GC
GC
GC
OX
OX
GC
GC
PPNG
PPNG
PPNG
OX
OX
OX
GC
OX
OX
OX
NI
OX

PPNG, and one man was not located. There were no so-called "skip generations" in which a case of non-PPNG was found to be the link between two cases of PPNG.

The December incident involved 13 cases of PPNG and 12 cases of non-PPNG. This incident had eight generations of spread and skip generations were noted. The 13 cases of PPNG were sexually linked as follows: index case; eight cases involving direct spread from another PPNG case; two PPNG cases acquired from a non-PPNG infected individual (skip generations); and two cases acquired from contacts who had a negative culture. The 12 cases of non-PPNG were sexually linked as follows: four cases involving direct spread from a PPNG case; six cases acquired from non-PPNG infected persons; and two cases acquired from contacts who had a negative culture.

Between the two incidents, preventive prophylaxis was administered to 38 individuals.

Comment

The appearance of both PPNG and non-PPNG in the two incidents suggests several possibilities. First, there may have been a lack of sensitivity in the beta-lactamase test. If this were true, then non-PPNG cases would be expected to spread PPNG to their sexual partners, the so-called skip generation. In fact, two such occurrences were noted in the December incident.

Second, diagnosis of gonorrhea without confirmation by culture could result in misidentification of cases. Two patients were diagnosed with gonorrhea based on a positive smear, but the culture subsequently did not grow the organism. Without a positive culture, a beta-lactamase test could not be performed. Of the 18 cases of non-PPNG diagnosed in the two incidents, these were the only two who were diagnosed solely on the basis of a positive smear. Thus, this does not seem to be a significant contributing factor.

Third, the non-PPNG cases could simply represent endemic regular gonorrhea in the community. A certain percentage of persons randomly screened can be expected to be infected with gonorrhea. The two incidents involved 57 persons, excluding the PPNG cases. In Kansas City the positivity rate for screening women at non-STD clinics is 4.1%. This would equate to an expected 2.3 persons being infected with non-PPNG, as opposed to the 18 actually observed.

Finally, there is a theory that PPNG strains have an inability to maintain themselves.[7] It is documented that *N. gonorrhoeae* has been, over the years, changing its antibiotic resistance.[8, 9] The possibiltiy exists that this change can occur in as short as one or two generations of spread. A mixed infection of both PPNG and non-PPNG strains in which the non-PPNG either achieves dominance in vivo or grows faster in vitro, may result in few, if any, PPNG organisms surviving. It has been shown that gonococcal populations are not only heterogenous, but also dynamic, with continuous introductions of new strains and loss of other strains.[9-11]

While it is not possible at this time to precisely delineate which factors operated to produce the pattern of infection described above, physicians should be aware that the pattern occurs. Therefore, physicians should adhere to guidelines recommending treating all gonorrhea patients and contacts in an endemic area as if they had PPNG. This will help reduce the incidence of preventable complications, such as pelvic inflammatory disease[12] and disseminated disease.[13] Without the ability to do auxotype/serovar class isolates of *N. gonorrhoeae*, many laboratories will continue to find beta-lactamase negative cultures when doing epiemiologic studies on PPNG cases.

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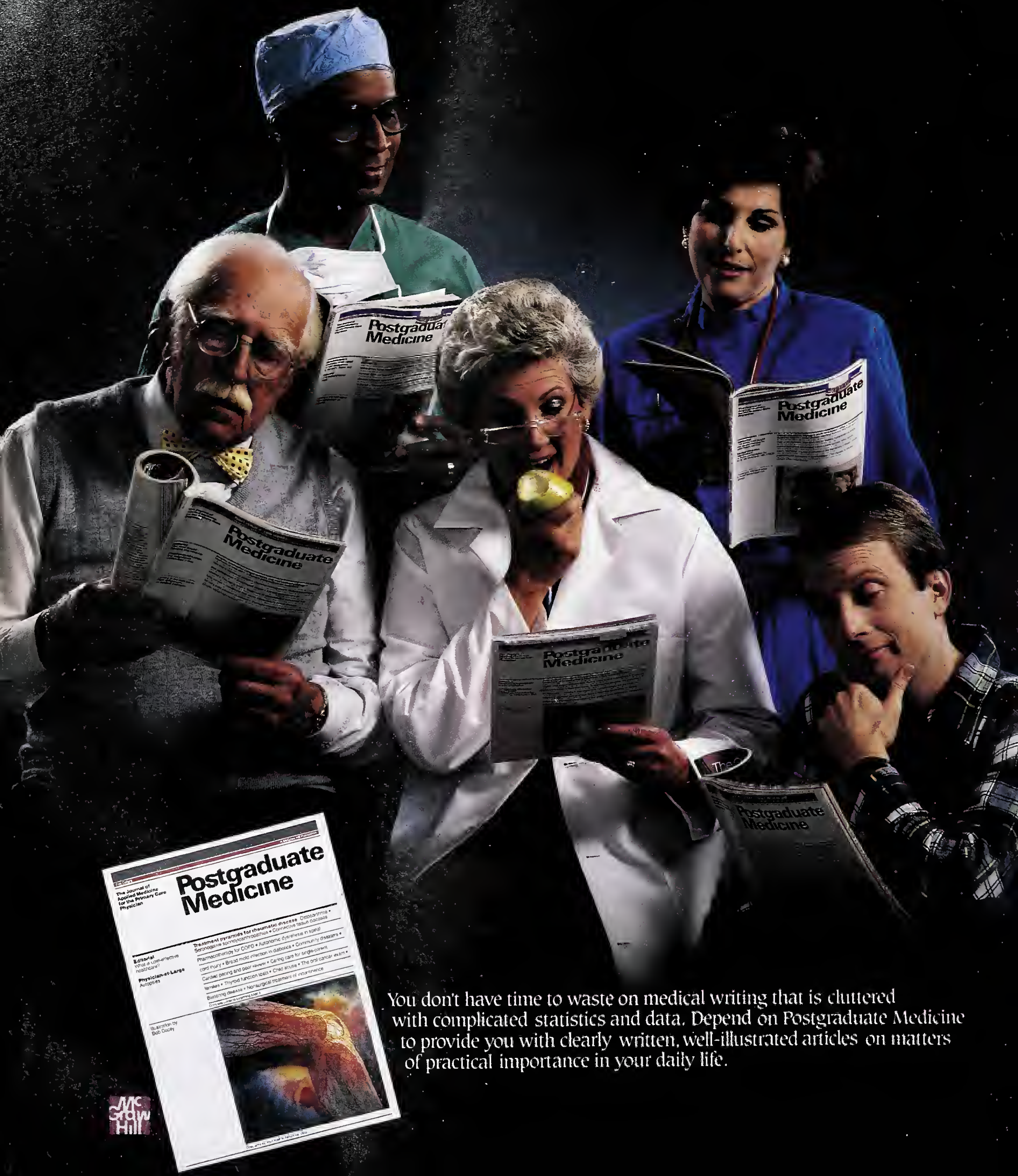
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Listeria monocytogenes

A Cause of Unexplained Death in Low-Risk Patients?

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Listeriosis is a significant cause of perinatal mortality, yet it is responsible for relatively minor maternal symptoms. Amniocentesis can be an important tool in identifying early intraamniotic infection with *Listeria.* Prompt treatment of mother and neonate may reduce perinatal morbidity and mortality.

Listeria monocytogenes is a well known pathogen responsible for significant perinatal mortality. Many cases of fetal death in the second trimester due to listeriosis have been reported. Likewise, neonatal cases have been described following pregnancies in which amnionitis was suspected. However, few cases have been reported in patients in the third trimester who with intact membranes and no obvious symptoms of infection. We report such a case, which resulted in neonatal sepsis. Amniocentesis can be critical when signs of infection are absent and only mild uterine activity is present.

Case Report

This patient was a 26-year-old white woman, gravida 1, at 32 weeks' gestation, who complained of very mild uterine contractions. Physical examination revealed her temperature to be 99.4°F. Abdominal examination revealed a nontender uterus of appropriate size for gestational age. Pelvic examination revealed the cervix to be 2 cm dilated, 80% effaced. The fetus was at a −1 station with a vertex presentation. Fetal heart rate monitoring revealed accelerations with good apparent variability. Laboratory tests on admission revealed a white blood cell count of 19.6 thousands/mm.^{3}

Ultrasound examination revealed a 32-week gestation and an estimated fetal weight of 1,600 gm. Signs of labor were minimal, but there was some reluctance to have the patient return home. An amniocentesis was performed. A gram stain of the amniotic fluid revealed a few gram-positive rods. The L/S ratio was 1.5:1. Phosphatidylglycerol by rapid testing was negative.

Tocolysis was instituted but was discontinued when the positive gram stain was noted. Labor ensued and the membranes ruptured spontaneously at 4 cm dilation, which was approximately three hours prior to delivery. Her temperature increased to 100.4°F. The patient delivered spontaneously with no difficulty. A midline episiotomy was performed under local anesthesia. The umbilical cord was triple clamped. The venous and arterial umbilical cord pH levels were 7.33 and 7.41 respectively. Apgars were 8 and 9 at 1 and 5 minutes respectively. Culture of the amniotic fluid later grew *Listeria monocytogenes.*

The female neonate weighed 1,875 gm. Initial blood gases on oxygen revealed a PCO_2 of 70 mmHg, PO_2 of 262 mmHg, and a pH of 7.15. Ventilatory care was required. A regimen of ampicillin 100 mg/kg loading dose plus 100 mg/kg/day and kanamycin 0.5 mg/kg/day was begun due to the positive gram stain of the amniotic fluid. The initial WBC count was 10,200 mm^3 with 7 bands, 20 polys, 60 lymphs, 10 monocytes, and adequate platelets. Hemoglobin was 13.2 g/dL and the bilirubin was 5.8 mg/dL over 1.0 mg/dL. Cultures of the infant's blood, skin surface, and gastric aspirate were all positive for *Listeria monocytogenes.* Spinal fluid cultures were negative. The patient was off the ventilator by the third neonatal day and had no further difficulties. A full 14-day course of ampicillin and kanamycin therapy was continued. Phototherapy was necessary to treat hyperbilirubinemia.

Discussion

Clinically, listeriosis has been described as a mononucleosis-like syndrome in the pregnant woman. There is often myalgia, dry cough, malaise, and fever several days prior to discovery of the infection. In the case described by Snodgrass,[1] infection was discovered immediately after the removal of a cerclage. Thus, there is at least occasional transplacental infection, resulting in the congenital form of the illness. The mother may have only minimal signs of infection. Relier[2] states that only 60% of mothers will have a febrile illness.

Mulder cites *Listeria* meningitis as the third most common cause of meningitis in the first month of life.[3] Taylor demonstrated the same serotype in the vagina of a mother and newborn with listeriosis.[4] He also described a late form of listeriosis in which the neonate was asymptomatic until about the fifth day of life. This appears to document an acquired version of this infection.

Voigt[5] described a case of a patient at 37 weeks' gestation whose membranes were ruptured 50 minutes prior to delivery. A cyanotic neonate was delivered after a difficult labor. Crepitations were noted in both lung fields and the neonate had an enlarged liver. The infant died at 14 hours of life. Blood cultures of the neonate revealed *Listeria monocytogenes* of the same serotype isolated from the mother's vagina, who had a transient elevation of her temperature a few hours *after* her delivery.

Petrilli and associates[6] described two cases of listeriosis diagnosed by amniocentesis during the midtrimester. The first case resulted in miscarriage after the membranes ruptured prematurely. The abortus weighed 270 gm. The second case involved an 18-week gestation in which the mother had suspicious clinical signs and was in premature labor. These cases demonstrate the importance of transabdominal amniocentesis in the midtrimester to evaluate the patient with fever or premature labor. The same group pointed out that the optimal length of antibiotic treatment is unknown, but that 14 days was considered adequate in their two case reports. At least two other cases of successfully treated maternal sepsis due to *Listeria monocytogenes* have been published. However, neither had an amniotic fluid culture performed.[7, 8]

Holshouser et al[9] utilized amniocentesis to exclude chorioamnionitis in a diabetic woman with *Listeria* endocarditis. The endocarditis was treated, and the mother was delivered of a normal infant with no evidence of infection. Thus, it is possible to treat listeriosis in the antepartum period with antibiotics. If the organism is discovered in the amniotic fluid, however, it appears that the fetus is at an extremely high risk for death.

Rivera-Alsina[10] described two cases of fetal distress involving listeriosis proven by neonatal blood cultures as well as cultures from the placenta and uterus taken immediately after delivery. In one case, the husband's stool was positive for *Listeria*. He apparently was employed in a slaughterhouse. Both of these patients had entered the hospital with intact membranes.

Listeria monocytogenes is a well-known pathogen in the perinatal period. However, in the absence of maternal fever, it is not routine to perform amniocentesis searching for bacteria, unless the patient has undergone successful tocolysis and amniocentesis is being undertaken to determine fetal pulmonary maturity. In our case, serious consideration was given to a diagnosis of false labor and sending the patient home with either no tocolysis or possibly only an oral tocolytic agent and bedrest. The diagnosis was correctly made with gram stain and subsequent culture. Due to the high mortality involved both in the prenatal and immediate neonate period, it was felt that at 32 to 33 weeks' gestation, further treatment of premature labor with simultaneous intravenous antibiotics was not indicated and delivery should be accomplished. Neonatal sepsis was confirmed. Under the circumstances, it was fortunate that the infant was delivered rather than the mother being sent home. Fetal death would have been the most likely result. This case seems to support the use of amniocentesis even in patients with very minimal premature uterine activity. An additional case of *Listeria monocytogenes* was recently discovered after an *afebrile* patient complained of *only* decreased fetal movement and underwent amniocentesis when delivery was contemplated (personal communication, Robert Liner, M.D., Mt. Zion Medical Center, San Francisco, 1987).

Amniocentesis can significantly influence clinical management and is especially important because many mothers with sepsis secondary to *Listeria monocytogenes* may have no signs of infection. Vigorous treatment of the neonate can result in good outcome despite the presence of the organism in the amniotic fluid and confirmed sepsis.

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Meniere's Disease

Recent Advances

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Columbia, Missouri

Meniere's disease, characterized by vertigo, tinnitus and hearing loss, is often a frustrating problem for clinician and sufferer. New approaches in the surgical treatment of the disease, and advances in the understanding of other causes of the symptoms, have made relief possible for more patients than ever before.

Meniere's disease is marked by the triad of episodic spinning vertigo, tinnitus, and fluctuant sensorineural hearing loss often accompanied by fullness in the affected ear. The problem can be frustrating for the patient and the physician. Unfortunately, the diagnosis is not often straightforward as there are many atypical variants. This underscores the fact that Meniere's disease continues to be poorly understood. The reason for this likely stems from the fact that this complex of symptoms to which we ascribe Meniere's disease has many causes. Fortunately, recent advances in diagnosis and treatment have been helpful in the occasional case which has failed to improve under standard medical or surgical management.

Clinical Presentation

The disease classically appears in the third and fourth decades of life with discrete spells of diminished hearing and tinnitus in one ear, spinning vertigo, nausea and vomiting. The patient may also note fullness in the affected ear. The spells typically last from 10 minutes to 24 hours with an equilibration period of unsteadiness and nausea lasting several days. Following the episode, the patient may have full recovery of hearing. However, the usual course of the disease is one of fluctuating hearing with an overall progressive deterioration of hearing over time. The low frequencies of hearing are usually affected initially, with loss of hearing across all frequencies as the disease advances. Progression of the disease can lead to total deafness with persistent dizziness.

Meniere's disease involves both ears in approximately 15% of cases. The second ear usually becomes affected later in the course of the disease. Meniere's disease, however, may present with bilateral involvement at the onset. Additionally, cochlear or vestibular symptoms alone may appear as the only manifestation of the disease.

Pathophysiology and Diagnosis

Our understanding of the pathophysiology of Meniere's disease began in 1938 when Hallpike and Cairns described the temporal bone histology of a patient with Meniere's disease.[1] Dilatation of the endolymphatic space (endolymphatic hydrops) and destruction of the hearing receptor cells (the organ of Corti) were correlated. The hydrops is believed to be secondary either to overproduction or inadequate resorption of endolymph, resulting in increased volume and pressure in the endolymphatic compartment of the inner ear. This results in dilatation of Reissner's membrane, which separates the endolymphatic and perilymphatic compartments, until rupture occurs with consequent mixing of the two fluids. The endolymphatic and perilymphatic compartments have different ionic compositions (Fig 1). Perilymph is low in potassium and high in sodium, whereas the opposite is true of endolymph. It is postulated that the ionic flux resulting from the mixing of the two fluids

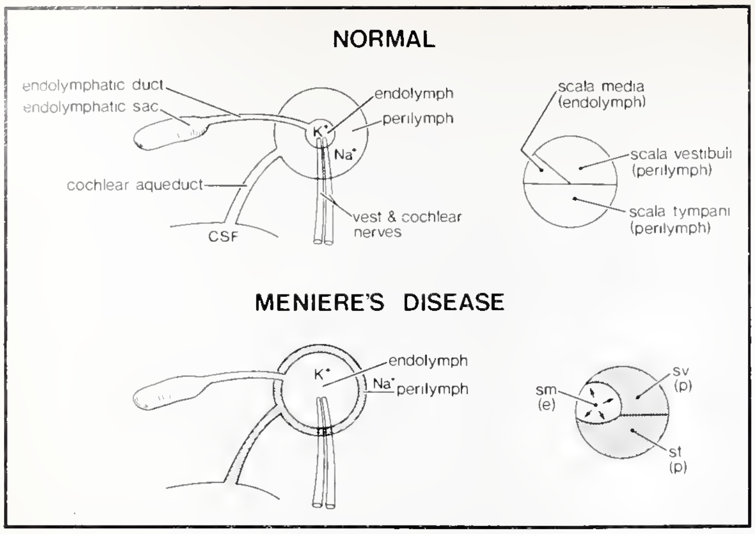

Fig 1. Schematic representation of cochlear pathophysiology in Meniere's disease contrasted with normal physiology. Note the dilated endolymphatic compartment and altered Na+ and K+ concentrations in Meniere's disease.

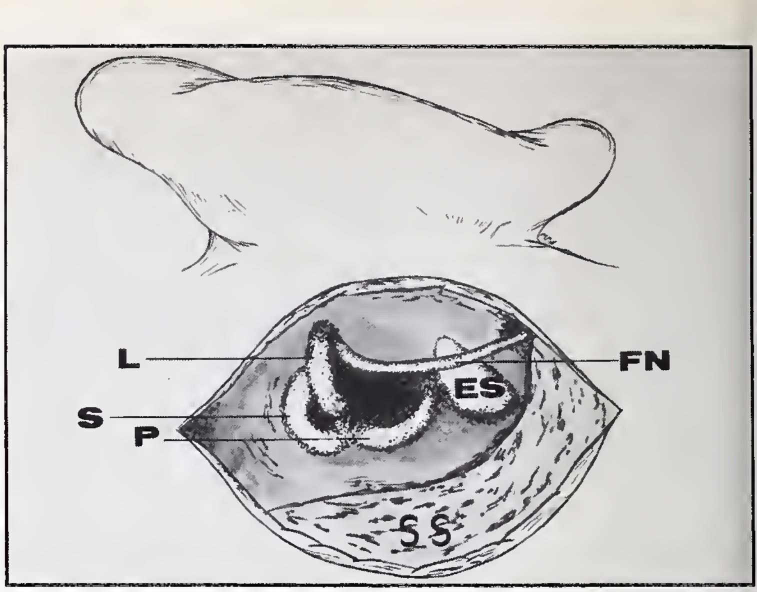

Fig 2. Surgical view of the endolymphatic sac (ES) and its relation to the posterior (P), superior (S) and lateral (L) semicircular canals, sigmoid sinus (SS) and facial nerve (FN).

after rupture of Reissner's membrane, leads to damage to the sensitive neuroepithelium of the hearing receptor cells. If the rupture is minor, the hearing may be recovered. With repeated insults, however, irreversible damage ensues, with permanent deterioration of hearing.

Obviously, prior to treatment the diagnosis must be firmly established. There are several other entities which mimic Meniere's disease that must be ruled out. Endolymphatic hydrops from other causes including syphilis, trauma or any other insult to the inner ear, may appear clinically in an identical manner.

Recently, it has been recognized that a leakage of inner ear fluid (perilymph fistula) may manifest itself with symptoms similar to those seen in Meniere's disease. This fistula may result from barotrauma or other stress that results in an acute pressure differential between the inner ear and the middle ear. The perilymph fistula does not respond to the management applied in Meniere's disease.

Treatment

The treatment of Meniere's disease is initially medical, and is effective in approximately 70% of patients. The standard of treatment has been the use of a strictly enforced low-salt diet in combination with a diuretic. The purpose of this regimen is to dehydrate the inner ear, thus reducing the pressure and volume of the endolymph. Various other medications, including vasodilators, have also been used, with questionable efficacy. Symptomatic treatment with diazepam (Valium) and meclizine (Antivert) is a useful adjunct but has no influence on the hearing.

Upon failure of medical control, surgical options are exercised. The endolymphatic sac operation to facilitate equilibration of the inner ear pressure was introduced in 1927 by Portmann[2] and popularized by House in 1964.[3] It is an operation used for patients with good hearing to help stabilize hearing loss and control vertigo. The endolymphatic sac is responsible for the resorption of endolymph. In Meniere's disease, it is felt to be ineffective in controlling the balance of production and resorption of endolymph. The operation begins with a complete mastoidectomy with exposure of the endolymphatic sac, which overlies the posterior fossa dura (Fig 2). The sac is opened and a silastic shunt is placed to maintain patency and allow shunting of inner ear fluid to the mastoid or subarachnoid space. The endolymphatic sac-shunt procedure is effective in stabilizing hearing and controlling vertigo in approximately 65% of patients in whom medical treatment has failed.

Several authors advocate an exploration of the middle ear to rule out a perilymph fistula prior to the endolymphatic sac operation (Fig 3). The eardrum is reflected forward and the round window and oval window of the cochlea observed for a leak of perilymph. Whether a leak is found or not, patching of both windows is performed in the event an occult fistula was not appreciated at the time of exploration. The endolymphatic sac operation then follows the unsuccessful search for a fistula.

For the patient who has poor hearing and intractable vertigo, destruction of the inner ear with removal of all or a portion of the vestibular neuroepithelium (labyrinthectomy) was introduced by Schucknecht in the 1950s. The goal of this operation is to remove diseased neuroepithelium, allowing central compensation to occur. This necessarily results in a concomitant loss of hearing. This operation may be performed through the ear canal or via a mastoid approach. This operation is indicated much less often today in the Meniere's population because of recent advances in cochlear implants. As Meniere's disease eventually affects both ears in a significant portion of

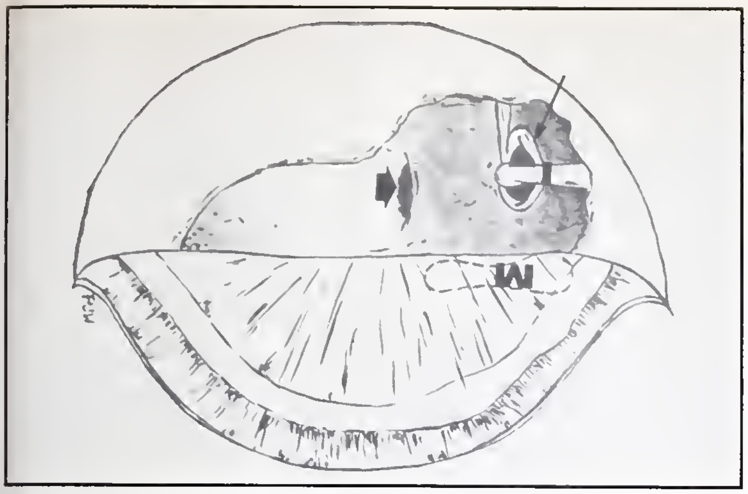

Fig 3. Eardrum is elevated anteriorly to allow exposure of the oval window (stapes footplate, narrow arrow) and round window (broad arrow) to observe for a possible perilymph leak. Malleus (M) and incus (I) are indicated for orientation.

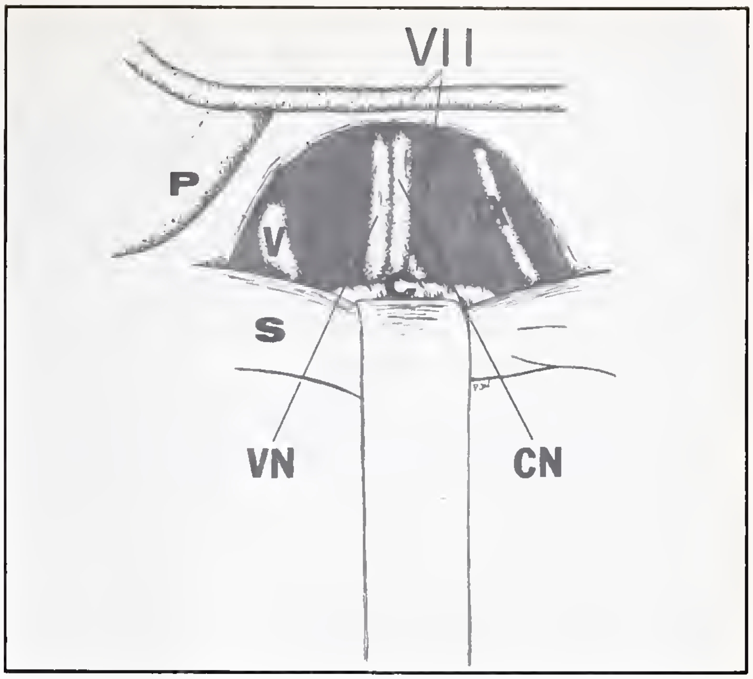
VII
P
V
S
VN
CN

Fig 4. Surgical exposure of the cerebellopontine angle after incision of the dura just inferior to the posterior semicircular canal (P) in the retrolabyrinthine approach. Retraction of the sigmoid sinus (S) affords excellent exposure of the vestibular (VN) and cochlear (CN) nerves, as well as the facial (VII), trigeminal (V) and glossopharyngeal (IX) nerves.

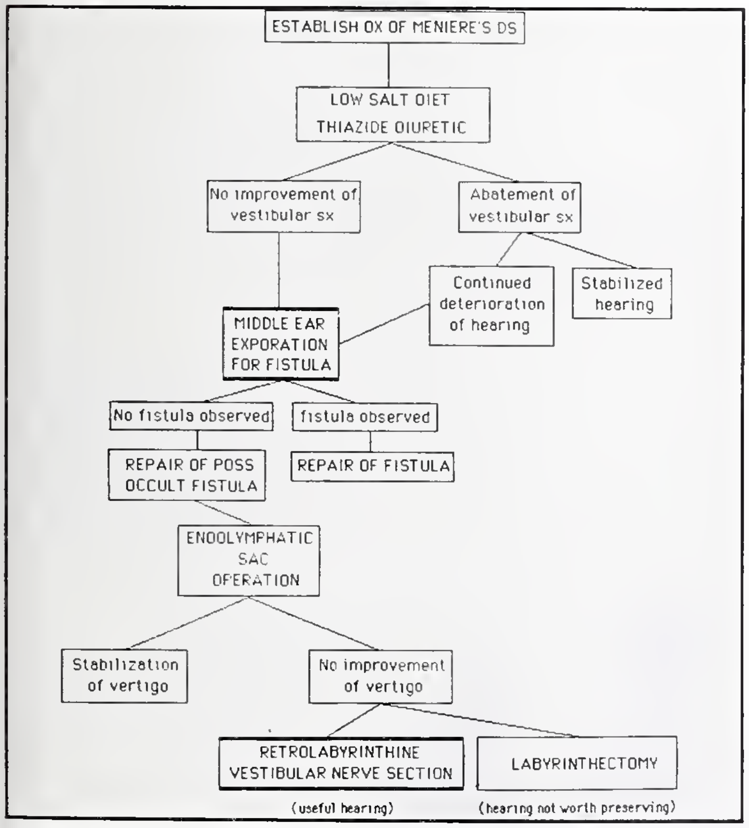
ESTABLISH DX OF MENIERE'S DS
LOW SALT DIET
THIAZIDE DIURETIC
No improvement of vestibular sx
Abatement of vestibular sx
Continued deterioration of hearing
Stabilized hearing
MIDDLE EAR EXPORATION FOR FISTULA
No fistula observed
fistula observed
REPAIR OF POSS OCCULT FISTULA
REPAIR OF FISTULA
ENDOLYMPHATIC SAC OPERATION
Stabilization of vertigo
No improvement of vertigo
RETROLABYRINTHINE VESTIBULAR NERVE SECTION
LABYRINTHECTOMY
(useful hearing)
(hearing not worth preserving)

Fig 5. Algorithm detailing management of Meniere's disease as currently practiced by authors.

cases, bilateral deafness is a possible outcome. The cochlear implant now allows hearing to be restored in these patients, but labyrinthectomy eliminates the possibility of using the cochlear implant.

For patients with good hearing and intractable vertigo who have failed to improve with the endolymphatic sac shunt procedure, section of the vestibular nerve, eliminating the afferent vestibular impulses to the brainstem, is advocated. This nerve has been surgically approached in a variety of ways. The original approach through the suboccipital route was described by Charles Frazier in 1908.[4] He sectioned the entire eighth nerve, thereby sacrificing any residual hearing. In 1931, McKenzie reported section of only the vestibular portion of the eighth nerve in an attempt to ablate vestibular function while preserving hearing.[5] This operation necessitated a major craniotomy with its attendant morbidity and mortality. Occipital bone was removed and the cerebellum retracted, allowing section of the vestibular nerve in the cerebellopontine angle.

Another approach to section of the vestibular nerve was developed by House in 1962. He began sectioning the vestibular nerve in the internal auditory canal with an approach through the middle cranial fossa, reporting excellent results.[6] Even though this approach had less morbidity than the suboccipital route, it still required a craniotomy with retraction of the temporal lobe of the brain.

In 1978, Silverstein pioneered section of the vestibular nerve through the retrolabyrinthine approach[7] (Fig 4). This represented a major advance, as no significant retraction of the brain is necessary with its attendant morbidity. The operation simply represents an extension of the endolymphatic sac procedure. Therefore, patients tolerate the operation much better, and their vertigo may be controlled without sacrifice of hearing.

In the retrolabyrinthine vestibular nerve section, the air cells of the mastoid are exenterated as in the complete mastoidectomy. Additional bone is removed over the sigmoid sinus and the dura anterior to the sigmoid sinus and posterior to the semicircular canals of the vestibular labyrinth. The dura is opened with sigmoid sinus retraction, allowing visualization of the cerebellopontine angle, which contains the seventh and eighth cranial nerves. The vestibular portion of the eighth nerve is sectioned after separation from the cochlear portion. The dura is closed with placement of abdominal fat in the mastoid cavity to help prevent leakage of cerebrospinal fluid. The length of the postoperative equilibration period depends on the age of the patient and the amount of pre-operative residual vestibular function.

Comments

Medical management is effective in controlling the deterioration of hearing and vestibular imbalance in approximately two-thirds of patients with Meniere's disease (Fig 5). In the remaining one-third, the endolymphatic sac operation is effective in controlling vertigo in 70%. The remaining 30% (or 11% of all Meniere's sufferers) may then be candidates for section of the vestibular nerve. The retrolabyrinthine vestibular nerve section has yielded an 85% cure rate of vertigo. The failures are mostly seen in patients in whom the operation was performed for dizziness due to causes other than Meniere's disease; careful selection of surgical candidates is extremely important. Incomplete section of the nerve may also account for some failures.

The retrolabyrinthine vestibular nerve section is not without its risks, however. The greatest risk is to the hearing, which has been reported to worsen in 11% of patients postoperatively. Of course, one must also take into account that the natural course of the disease is one of progressive deterioration. Therefore, these results may simply reflect the course of disease. Because this operation involves violation of the dura there is the risk of cerebrospinal fluid leak, meningitis, and other intracranial complications. Fortunately, these complications are rare. In summary, retrolabyrinthine surgical treatment of perilymph fistula has allowed cures in patients with apparent symptoms of Meniere's disease who previously would have been labeled as medical and surgical failures. Early identification and repair of a fistula is necessary for optimal preservation of hearing.

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to find
just the
right room.

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Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients[2] revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol—which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy? Fifty-nine percent of the time, INDERAL LA stood on its own.

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For the noncompliant patients in your practice, INDERAL LA may well be the answer.

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*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

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Please see next page for brief summary of prescribing information

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION SEE PACKAGE CIRCULAR)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride INDERAL LA is available as 60 mg, 80 mg, 120 mg and 160 mg capsules

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites When access to beta-receptor sites is blocked by INDERAL the chronotropic, inotropic and vasodilator responses to beta-adrenergic stimulation are decreased proportionately

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol Over a twenty-four (24) hour period blood levels are fairly constant for about twelve (12) hours then decline exponentially

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product INDERAL LA can provide effective beta blockade for a 24-hour period

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic INDERAL LA is not indicated in the management of hypertensive emergencies

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope INDERAL LA also improves exercise performance The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation Clinical improvement may be temporary

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL

WARNINGS. CARDIAC FAILURE Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle

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LONG ACTING CAPSULES

60 mg 80 mg 120 mg 160 mg

80
LA 120
LA 160
*

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible)

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

MAJOR SURGERY The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol However, such patients may be subject to protracted severe hypotension Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers

DIABETES AND HYPOGLYCEMIA Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels

THYROTOXICOSIS Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case, this resulted after an initial dose of 5 mg propranolol

PRECAUTIONS. GENERAL Propranolol should be used with caution in patients with impaired hepatic or renal function INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test Withdrawal may lead to a return of increased intraocular pressure

CLINICAL LABORATORY TESTS Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

DRUG INTERACTIONS Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol

Ethanol slows the rate of absorption of propranolol

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity There were no drug-related tumorigenic effects at any of the dosage levels Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug

PREGNANCY Pregnancy Category C INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

NURSING MOTHERS INDERAL is excreted in human milk Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman

PEDIATRIC USE Safety and effectiveness in children have not been established

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy

Cardiovascular Bradycardia congestive heart failure; intensification of AV block; hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type

Central Nervous System Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, vivid dreams, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis

Allergic Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress

Respiratory: Bronchospasm

Hematologic Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported

Miscellaneous Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL INDERAL LA has different kinetics and produces lower blood levels Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval

HYPERTENSION — *Dosage must be individualized* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved The usual maintenance dosage is 120 to 160 mg once daily In some instances a dosage of 640 mg may be required The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks

ANGINA PECTORIS — *Dosage must be individualized* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS)

MIGRAINE — *Dosage must be individualized* The initial oral dose is 80 mg INDERAL LA once daily The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued It may be advisable to withdraw the drug gradually over a period of several weeks

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use

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REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I: The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily *Arch Intern Med* 1985; 145 1321-1323.

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New Members

- **Marsha L. Bailey, M.D.,** 819 Locust, Barnes Sutter Health Care, St. Louis 63101, has become a member of the St. Louis Metropolitan Medical Society. Dr. Bailey received her preliminary education at West Virginia University and obtained her medical degree at Marshall University Medical School in 1984. She completed her residency at Indiana University Medical Center, Indianapolis, IN. Dr. Bailey specializes in occupational medicine.

- **Bernard F. Bettasso, M.D.,** 2700 McClellend Blvd., Suite 108 (Building A), Joplin 64801, has become a member of the Jasper County Medical Society. Dr. Bettasso received his preliminary education at Illinois Benedictine College and obtained his medical degree at the University of Illinois College of Medicine in 1984. He completed his residency at St. Louis University Hospitals, St. Louis, MO. Dr. Bettasso specializes in internal medicine.

- **Eric J. Douglass, M.D.,** 2400 Frederick Ave., St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Douglass received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1982. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Douglass specializes in anesthesiology.

- **Gerald F. Dugan, M.D.,** 6650 Troost Ave., Suite 103, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Dugan received his preliminary education at Oklahoma State University and obtained his medical degree at the University of Oklahoma in 1982. He completed his residency at the University of Oklahoma, Oklahoma City, OK. Dr. Dugan specializes in orthopedic surgery.

- **James F. Eckenrode, M.D.,** 3205 Lansing, Columbia 65201, has become a member of the Boone County Medical Society. Dr. Eckenrode received his preliminary education at the University of Michigan and obtained his medical degree at the University of Michigan in 1980. He completed his residency at the University of Michigan Hospital, Ann Arbor, MI. Dr. Eckenrode specializes in orthopedics.

- **Janet M. Fleck, M.D.,** 801 Faraon, Pathology Dept., St. Joseph 64501, has become a member of the Buchanan County Medical Society. Dr. Fleck received her preliminary education at Purdue University and obtained her medical degree at Indiana University School of Medicine in 1982. She completed her residency at Mount Sinai Hospital, New York, NY. Dr. Fleck specializes in pathology.

- **James W. Fleshman, M.D.,** 216 S. Kingshighway, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Fleshman received his preliminary education at Washington University and obtained his medical degree at the Washington University Medical Center in 1980. He completed his residency at Jewish Hospital, St. Louis, MO. Dr. Fleshman specializes in colon and rectal surgery.

- **Anthony C. Griffin, M.D.,** Barnes Hospital Plaza, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Griffin received his preliminary education at Brown University and obtained his medical degree at the Washington University School of Medicine in 1987. He is completing his residency at Barnes Hospital, St. Louis, MO. Dr. Griffin specializes in general surgery.

- **Stephen E. Halpin, M.D.,** 711 Grand Avenue, Hannibal 63401, has become a member of the Northeast Missouri County Medical Society. Dr. Halpin received his preliminary education at Quincy College and obtained his medical degree at the Southern Illinois University School of Medicine in 1982. He completed his residency at the SIU School of Medicine, Springfield, MO. Dr. Halpin specializes in internal medicine.

- **Rebecca S. Hierholzer, M.D.,** 2800 Hospital Drive, North Kansas City 64116, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hierholzer received her preliminary education at the University of Missouri-Kansas City and obtained her medical degree at UMKC in 1981. She completed her residency at Truman Medical Center, Kansas City, MO. Dr. Hierholzer specializes in emergency medicine.

- **Elizabeth A. Jones, M.D.,** 373 W. 101st Terrace, Kansas City 64114 and 5799 Broadmoor, Mission, Kansas 66202, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Jones received her preliminary education at Colorado State University and obtained her medical degree at the University of Kansas in 1983. She completed her residency at St. Luke's Hospital, Kansas City, MO. Dr. Jones specializes in internal medicine.

- **William D. Kessler, Jr., M.D.,** 2700 McClelland Blvd., Building B., Suite 101, Joplin 64804, has become a member of the Jasper County Medical Society. Dr. Kessler received his preliminary education at the University of Illinois and obtained his medical degree at Southern Illinois University School of Medicine in 1984. He completed his residency at the University of Illinois College of Medicine, Peoria, IL. Dr. Kessler specializes in family practice.

- **Charles K. Lee, M.D.,** 6700 Troost Ave., Suite 500, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Lee received his preliminary education at Washburn University and obtained his medical degree at the University of Kansas School of Medicine in 1974. He completed his residency at Duke University Medical Center, Durham, NC. Dr. Lee specializes in cardiovascular and thoracic surgery.

- **Ian L. Love, M.D.,** 2700 McClelland Blvd., Suite 212, Building B, Joplin 64803, has become a member of the Jasper County Medical Society. Dr. Love received his preliminary education at Case Western Reserve University and obtained his medical degree at the University of Health Sciences/ Chicago Medical School in 1973. He completed his residency at New Haven Hospital, New Haven, CT. Dr. Love specializes in diagnostic radiology.

- **Gregory H. Mears, D.O.,** P.O. Box 96, 103 W. Main, Highland, KS 66035, has become a member of the Buchanan County Medical Society. Dr. Mears received his preliminary education at Emporia State University and obtained his medical degree at the University of Health Sciences in 1985. He completed his residency at Flint Osteopathic Hospital, Flint, MI. Dr. Mears specializes in family practice.

■ **George D. Mulder, M.D.,** 1314 N. 36th St., St. Joseph 64501, has become a member of the Buchanan County Medical Society. Dr. Mulder received his preliminary education at Hope College and obtained his medical degree at the University of Michigan Medical School in 1974. He completed his residency at the University of Missouri-Columbia Hospital and Clinics, Columbia, MO. Dr. Mulder specializes in general and peripheral vascular surgery.

■ **Linda K. Nixon, M.D.,** 401 S. Clairborne, Olathe, KS 66062, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Nixon received her preliminary education at Southwestern College and obtained her medical degree at the University of Kansas in 1983. She completed her residency at Children's Mercy Hospital, Kansas City, MO. Dr. Nixon specializes in pediatrics.

■ **Muhammad A. Nyazee, M.D.,** 7520 National Bridge, St. Louis 63121, has become a member of the St. Louis Metropolitan Medical Society. Dr. Nyazee received his preliminary education at Government Sarzodha College and obtained his medical degree at Nishtar Medical College-Pakistan in 1974. He completed his residency at Lebanon Hospital-Bronx, New York, NY. Dr. Nyazee specializes in internal medicine.

■ **Timothy O'Keefe, M.D.,** 2700 McClelland, Suite 204, Joplin 64804, has become a member of the Jasper County Medical Society. Dr. O'Keefe received his preliminary education at the University of Illinois and obtained his medical degree at the Southern Illinois University School of Medicine in 1984. He completed his residency at St. Mary's Hospital, Kansas City, MO. Dr. O'Keefe specializes in family medicine.

■ **Robert E. Perry, M.D.,** 1854 Martin Center, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Perry received his preliminary education at Lee College and obtained his medical degree at the University of Maryland in 1982. He completed his residency at Sinai Hospital, Baltimore, MD. Dr. Perry specializes in internal medicine.

■ **Thomas M. Reardon, M.D.,** Truman Medical Center, 2301 Holmes, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Reardon received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1984. He is completing his residency at Truman Medical Center, Kansas City, MO. Dr. Reardon specializes in general surgery.

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Medical School News

The University of Missouri-Columbia

- **Karen Bennett, Ph.D.**, assistant professor of microbiology, has received a $25,000 Rockefeller Foundation award for her research of "Germline Determination in Ascaris Lumbricoides."

- **James Dexter, M.D.**, professor and chairman of neurology, was interviewed and quoted extensively by *Newsweek* for their December 7, 1987 issue cover story on headaches. Dr. Dexter is president of the American Association for the Study of Headache.

- **G. W. N. Eggers, Jr., M.D.**, professor and chairman of anesthesiology, has been elected to a second term as Vice-President for Scientific Affairs by the House of Delegates of the American Society of Anesthesiologists. As vice president, Dr. Eggers oversees activities of the Scientific Council which include reviewing articles for the Journal of Anesthesiology and planning the annual meeting.

- **James Daly, M.D.**, has joined the School of Medicine as chairman of the Department of Obstetrics and Gynecology. Since 1982, Dr. Daly served as professor and chairman of obstetrics and gynecology at Creighton University School of Medicine in Omaha. He succeeded **David G. Hall, M.D.**, professor of obstetrics and gynecology, who retired from the chairmanship last summer. **William Griffin, M.D.**, professor of obstetrics and gynecology, served as interim department chairman.

- **Herbert Ferrari, M.D., J.D.**, clinical professor of anesthesiology and surgery, recently completed Law School at the University of Missouri-Columbia. In January, he presented a workshop on medical malpractice issues in anesthesiology at a conference sponsored by the Institute for Postgraduate Education in Hawaii. Dr. Ferrari also recently won First Prize at the Southern Medical Association's meeting for his exhibit on High Frequency Jet Ventilation. The exhibit, which shows how this relatively new type of ventilation works, is scheduled to be shown at the World Congress of Anesthesiologists in Washington, D.C. in May of this year.

  High Frequency Jet Ventilation, developed in 1977, differs from conventional ventilation because it exchanges the air in a person's lungs gradually with short low pressure bursts of air rather than with large volumes of air pushed into the lungs at one time. Dr. Ferrari and the team of researchers studying this system at the School believe this type of ventilation can make the difference between life and death for some critically injured patients.

  Also working on the research and the exhibit are **G. W. N. Eggers, M.D.**, professor and chairman of anesthesiology, **Michael Metzler, M.D.**, assistant professor of surgery, **Robert Shaw, M.Ed., R.R.T.**, senior registered respiratory therapist, **Nancy Gray, M.Ed., R.R.T.**, clinical instructor of respiratory therapy and **William Beach, R.R.T.**, supervisor of pulmonary function.

- **Richard Finkelstein, Ph.D.**, Millsap Distinguished professor and chairman of microbiology, was an invited speaker at the Pasteur Institute Centenary Symposium: Molecular Biology and Infectious Diseases which was in Paris, France last fall. Dr. Finkelstein along with **Mary Finkelstein, Ph.D.**, research associate professor of microbiology, and **Rex Newsham, M.S.**, research specialist, presented a paper at the 23rd Joint Conference on Cholera, U.S.-Japan cooperative Medical Sciences Program held in Williamsburg, VA.

- **A study on infant abuse authored by Joseph Giangiacomo, M.D.**, associate professor of ophthalmology, is published in the March issue of *Ophthalmology*, the official journal of the American Academy of Ophthalmology. In the study, Dr. Giangiacomo warns physicians that unexplained hemorrhages of the retina in young children may be one of the first signs of brain damage caused by vigorous shaking. While retinal hemorrhages may be the result of other problems, he says physicians should monitor children with such unexplained hemorrhages for other signs of injury.

- **John K. Glenn, Ph.D.**, associate professor of family and community medicine and associate professor of health services management, co-authored "Physician Referrals in a Competitive Environment: An Estimate of the Economic Impact of a Referral," which was published in the Oct. 9, 1987 issue of the Journal of the American Medical Association. In his study of 225 patient referrals from rural areas to University Hospital and Clinics between 1982 and 1984, Dr. Glenn reported that 110 patients were admitted to the hospital and the remainder were treated in outpatient settings.

- **Bruce Harry, M.D.**, assistant professor of psychiatry, recently presented a workshop on "Research in Forensic Psychiatry" and moderated a panel discussion on "Forensic Sciences for the Forensic Psychiatrist" at the annual meeting of the American Academy of Psychiatry and the Law in Ottawa, Canada. Dr. Harry was also appointed chairperson of the Education Committee, served as chairperson of the Institutional Forensic Psychiatry Committee and presented results of a nationwide survey of institutional forensic psychiatrists to the Executive Committee.

- **Robert Hoffman, M.D.**, assistant professor of medicine, recently received the VA Rags Award of $25,000 and a VA Merit Review Award of $47,850 for his research in Immunogenetics of Mixed Connective Disease. He has also received a $900,000 grant from the Mizzou Alumni fund for his faculty development proposal: Molecular Genetic Basis of Juvenile Rheumatoid Arthritis.

- **Syed Arshad Husain, M.D.**, professor of psychiatry and chief of child and adolescent psychiatry, was an invited speaker at the Congress of the World Federation for Mental Health held last fall in Cairo, Egypt. He spoke on "Cross-Cultural Aspects of Child Rearing." Dr. Husain also was appointed associate editor of *Mental Peace*. This journal, published six times a year, is distributed to psychiatrists, psychologists, social workers, and other mental health professionals in 40 countries.

■ Approximately one thousand scientists from around the world met to discuss advances in Continuous Ambulatory Peritoneal Dialysis (CAPD) at the 8th annual CAPD Conference in Kansas City last month. The conference, sponsored by the University of Missouri-Columbia School of Medicine has become the world's leading conference on CAPD. **Karl Nolph, M.D.,** professor and director of nephrology, chaired the meeting during which scientists from six continents gave presentations. Already 16,000 kidney patients in the United States and 35,000 worldwide are taking advantage of the CAPD treatment which Dr. Nolph helped develop in the late 1970's. For many kidney patients, CAPD offers reduced costs and a more flexible lifestyle.

University of Missouri-Kansas City

■ **Larry Dall, M.D.,** docent and associate professor of Medicine, in early 1988 was elected as a fellow of the American College of Physicians.

■ **Marjorie Sirridge, M.D.,** professor of Medicine and assistant dean for Curriculum, spoke to members of the American Medical Student Association (AMSA) Regional Convention in Kansas City, Kansas, on "Women in Medicine," and to members of the Independence Chapter of the American Association of University Women (AAUW) on "Health Interests and Concerns of the Modern American Woman."

■ **Timothy Schubert, M.D.,** docent and associate professor of Medicine, was a guest lecturer at the annual meeting of Vietnamese Physicians of Texas in Dallas, and presented "Update in Treatment of Peptic Ulcers and Disease" at a Gastroenterology Symposium for the West Central Illinois Physicians Association.

■ Professor emeritus **Dr. Tom Hamilton** and his wife **Betty Hamilton,** who team-teach microbiology, received the ultimate honor from medical students in mid-January, when students elected them as recipients of the annual *Faculty Appreciation Award*. They were presented with the award as a part of the Final Annual Provost's Award Night (FAPAN), an annual spoof and variety show. Also honored was **Jim Stanford, M.D.,** and his docent team, Blue 4. Dr. Stanford's team received the *Snake of Aesculapius Prize* (SOAP), awarded to the team of students with the highest academic and achievement record for the year.

■ Nine medical students recently were named members of Phi Kappa Phi honor society. Criteria for membership in the society includes recommendation by faculty members or administrators, superior scholastic achievement and good character. The students chosen for this honor are: **Ann Agnew, Lisa L. Buchheit, David Griffin, Ganesh Gupta, David Kearney, Carol Ram, Anita Singh, Dave Weber,** and **Jack Capodice.**

■ Several speakers of note have made presentations recently. In January, **Craig Henderson, M.D.,** associate professor of Medicine at Harvard Medical School, spoke on "Adjuvant Therapy for Breast Cancer," and **George Sarosi, M.D.,** spoke on "Histoplasmosis." Dr. Sarosi was the annual *Thomas Mahvi Memorial Lecturer*, a lectureship in microbiology and infectious disease, which is co-sponsored by Truman Medical Center and the Medical School. Dr. Mahvi, was professor and director of Microbiology at TMC for five years; the lectureship was established after his untimely death in the Hyatt Hotel disaster in 1981.

■ **Dr. Walter Menninger** of the Menninger Foundation spoke in January on "Morale: A Measure of Adaptation to Change." He was the annual *Dr. Stanley Reitman Memorial Lecturer*, which is co-sponsored by the Medical School and the school's St. Louis Friends group. Dr. Reitman was an organizer of the St. Louis Friends of UMKC School of Medicine, the second president of that organization, and the father of two graduates, **Laurie Reitman Hadzima, M.D.,** and **Larry Reitman, M.D.**

■ A paper by **William G. Barnes, Ph.D.,** professor of Microbiology, appeared in the proceedings of the Fifth International Symposium on Rapid Methods and Automation in Microbiology and Immunology in Florence, Italy, this winter. His topic was "Effect of Temperature on Clostridium Difficile Detection as Determined by the Culturette Clostridium Difficile Test."

■ **Richardson K. Noback, M.D.,** senior docent, and professor of Medicine, recently was renominated for a third term as a member of the Board of Directors of the American Federation for Aging Research. He also was a planning committee member of the second annual Governor's Conference on Aging, held in St. Louis in November, a meeting at which he also presented a paper and a videotape.

■ **Daniel Whitman, M.D.,** senior docent and associate professor of Medicine, recently received the American Medical Association's Physician Recognition Award.

Washington University

■ **Charles B. Anderson, M.D.,** professor and chief of the division of general surgery at Washington University School of Medicine has been elected to the Board of Governors of the American College of Surgeons as a governor-at-large from Missouri.

Governors serve as the direct communications link between chapters or surgical specialty societies and the fellows, officers, regents and staff of the American College of Surgeons. Anderson will serve a three-year term that may be extended to six years.

Anderson is general surgeon-in-chief at Barnes Hospital and a staff surgeon at Children's and Jewish hospitals. He has been involved in kidney transplantation work for more than 15 years and developed the renal transplantation program at Barnes Hospital. He is involved in both the clinical research aspects of vascular surgery, and is among the first surgeons in the United States to be certified in vascular surgery by the American Board of Surgery.

Anderson is best known for his work to combat rejection in kidney transplants. He is responsible for the concept of pretreating potential kidney recipients with the donor's antigens and concomitant immunosuppression. The work was considered provocative and controversial when it was introduced to the scientific community by Anderson and his associate William Newton, M.D., in the early 1970s.

He joined the faculty at Washington University School of Medicine in 1968 as an instructor in surgery. He was named a full professor in 1979 and in 1984 became chief of the division of general surgery.

Anderson is a member of many prestigious surgical societies, including the American Surgical Association, the American College of Surgeons, the Society for Vascular Surgery, the Society of Clinical Surgery and the Transplantation Society. He has published more than 150 articles on his research in vascular surgery and kidney transplantation.

■ **Henry J. Kaplan, M.D.,** professor of ophthalmology at Emory University School of Medicine in Atlanta, has been appointed as head of the ophthalmology department of Washington University School of Medicine in St. Louis. The appointment is effective April 1, 1988. Kaplan replaces **Bernard Becker, M.D.,** professor of ophthalmology, who will continue teaching and conducting research at the School of Medicine.

Becker has headed the ophthalmology department for 34 years. He is well known for his research into the causes and control of glaucoma. A graduate of Princeton University and Harvard Medical School, he has published more than 350 articles.

Kaplan has been the director of research in the department of ophthalmology at Emory since 1984. His research focuses on the regulation of the immune response of the eye, and how viral infections such as herpes simplex and AIDS affect the eye.

Kaplan is a graduate of Columbia University. He received the doctor of medicine degree from Cornell University in 1968, and held an internship in medicine at Lakeside Hospital, the University Hospitals of Cleveland, Case-Western Reserve University. He served a surgical residency at Bellevue Hospital, an ophthalmology residency at the University of Iowa Hospitals and Clinics, and a retina-vitreous fellowship at the Medical College of Wisconsin. He was a post-doctoral National Institutes of Health (NIH) fellow in immunology at the University of Texas Health Science Center (Dallas), and later served as assistant professor of cell biology at the University of Texas.

Kaplan is a member of many professional societies, research advisory committees and editorial boards. He is recipient of the Alcon Research Institute's Scientific Award for 1987, and currently serves as chairman of the Visual Sciences Study Section at the NIH.

■ Washington University School of Medicine in St. Louis has selected 12 students as the first *Spencer T. and Ann W. Olin Medical Fellows*. The fellowships were made possible by a $30 million gift from the Spencer T. and Ann W. Olin Foundation as part of the university's fund-raising campaign, the Alliance for Washington University. The award is providing $1.5 million a year for the next 20 years and is part of the university's permanent endowment.

The fellowships were created in an effort to help fill the continuing shortage of physicians who pursue careers in biomedical research. The awards are primarily for students in the six-year Medical Scientist Training Program (MSTP), where students train simultaneously as physicians and researchers and that grants a combined M.D./Ph.D. degree. Olin Fellowships also are awarded to selected students pursuing doctoral degrees in biomedical science.

"The students selected as Olin Fellows are the best of best," says chairman of the Olin committee **Daniel Hartl, Ph.D.,** the *James S. McDonnell Professor of Genetics* and head of the Department of Genetics at Washington University. "They will be the leaders of biomedical research in the 21st century and eventually will be represented at every important medical research center in the United States."

The fellowships provide full tuition, living expenses and a small annual grant for books, journals and research supplies. Fellowships are not applied for, but are based on nominations submitted by faculty, MSTP students and doctoral candidates. Final selection is made by a committee headed by Hartl.

Of the new Olin Fellows, ten are from the MSTP Program and two are pursuing doctoral degrees. They are: (MSTP) **Richard J. Auchus** of Passaic, N.J.; **Mark A. Behlke** of El Paso, Texas; **Tommy W. Chu** of Danville, Ill.; **Phyllis L. Faust** of Glencove, N.Y.; **Robert O. Heuckeroth** of Silver Spring, Md.; **Roger C. Inhorn** of Dane, Wis.; **Jonathan W. Mink** of St. Paul, Minn.; **David A. Sweetser** of Fairfield, Calif., **Megumi Taniuchi** of Bethesda, Md.; **Dwight A. Towler** of Langdon, N.D.; (doctoral) **David Burke** of Cortland, N.Y.; and **Qiao Yan** of Shanghai, China.

■ A grant of $12.1 million from the *Lucille P. Markey Charitable Trust* of Miami will enable Washington University School of Medicine to establish the Markey Center for Research on the Molecular Biology of Human Disease, according to Louis J. Hector, Chairman of the Trust's Board.

The Markey Center for Research on the Molecular Biology of Human Disease will have five principal areas of investigation: molecular basis of the immune response, structure and function of animal cells, molecular pharmacology, molecular genetics, and protein structure and function.

Among the important components of the Markey Center will be an imaging laboratory equipped with state-of-the-art computer-assisted microscopes for visualizing cell structures. Other components will include new methods for determining the folding characteristics and function of proteins, and new methods of manipulating DNA molecules for the identification and study of human genetic diseases.

The $12.1 million will be disbursed by the Lucille P. Markey Charitable Trust over a five-year period with a first-year allocation of approximately $1.8 million.

The Lucille P. Markey Charitable Trust was established in 1983 to distribute the estate of the late Lucille P. Markey. The trust funds' sole activity is to support and encourage basic medical research through grants, fellowships and through the Lucille P. Markey Scholar Awards in Biomedical Science. The Markey Trust now provides Washington University with grants totalling more than $1.4 million. Those funds sponsor two Lucille P. Markey Medical Scholars — **Ellen Li, M.D., Ph.D.,** and **John Cooper, M.D., Ph.D.,** — and a fellowship program that annually supports predoctoral students in the Division of Biology and Biomedical Sciences.

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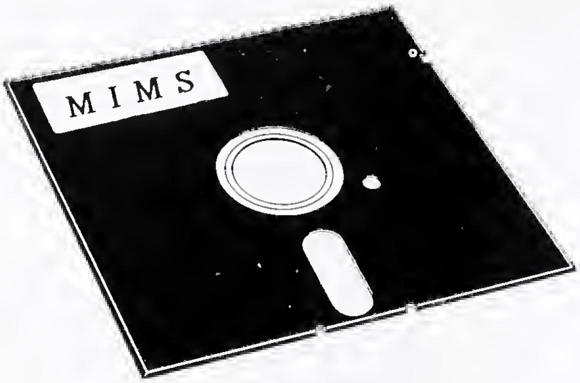

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References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
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3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Physician's Recognition Awards

Twenty-seven MSMA members qualified for the MSMA-AMA Physician's Recognition Award during December 1987.

The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

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George D. Amromin, *Columbia*
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Vijay K. Sadhu, *Columbia*
Clark C. Watts, *Columbia*

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Martin H. Christ, *St. Joseph*

Callaway

Richard A. Osbourn, *Fulton*

Cape Girardeau

Ernest D. Johnson, *Cape Girardeau*

Greene

Charles J. Ash, *Springfield*
Constance O. Lim, *Springfield*
Thomas P. Sweeney, *Springfield*

Jasper

Robert B. Brigden, *Neosho*

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Raymond A. Amoury, *Kansas City*
Raymond W. Hartwig, *Kansas City*
Judith P. Hurwitz, *Kansas City*
Harry B. Overesch, *Kansas City*

Ozarks

F. R. Esparrago, *Monett*
Arturo H. Montellano, *Monett*

Perry-Ste. Genevieve

Lawrence W. Feltz, *Perryville*

Pettis

A. J. Campbell, *Sedalia*

SEMO

Aziz O. Mahboubi, *Sikeston*

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Navin J. Amin, *St. Louis*
Arthur L. Casey, *St. Louis*
Ruth C. Comens, *St. Louis*
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Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

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Issued 3/84

References:
1. Grossman MI: *Scand J Gastroenterol* 58 (suppl 15):7-16, 1980.
2. Marks IN, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly.* Edinburgh, Churchill Livingstone, 70-81, 1984.
3. Krentz K, Jablonowski H, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly.* Edinburgh, Churchill Livingstone, 62-69, 1984.

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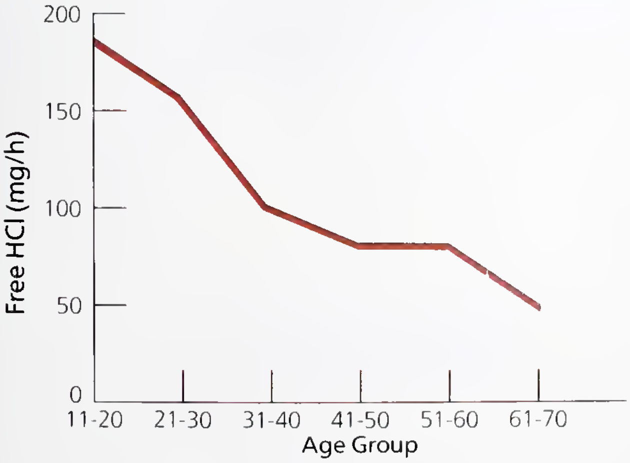

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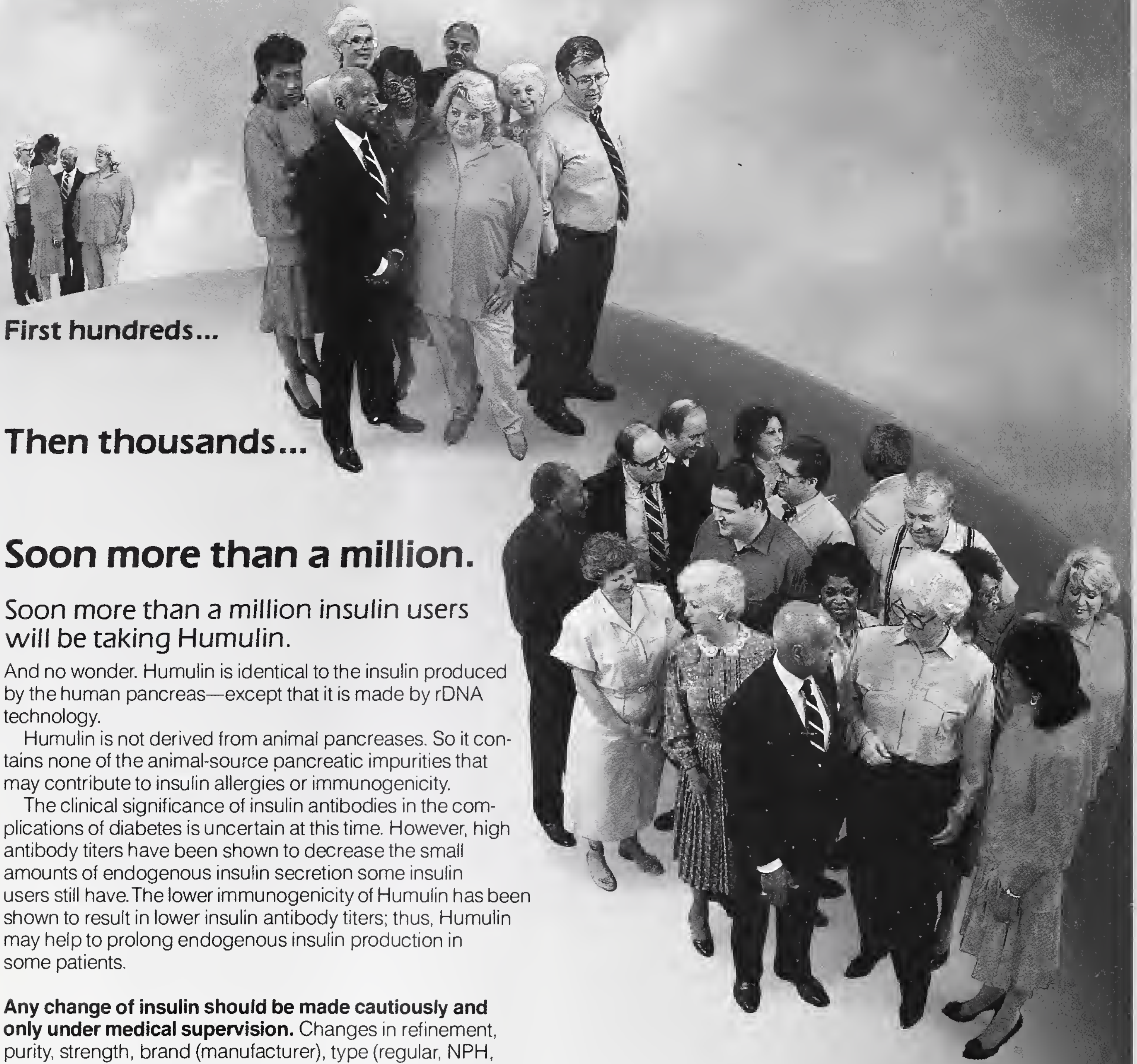

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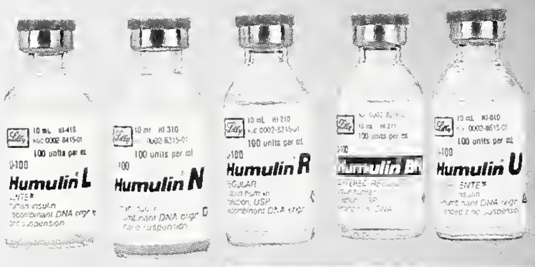

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In Memoriam

- **Brig. Gen. Percy J. Carroll, M.D.**, died December 22, 1987 at the age of 96. Gen. Carroll, a surgeon, was chief surgeon of the American forces in the Southwest Pacific under Gen. Douglas MacArthur during World War II. He initiated the idea of Mobile Army Surgical Hospitals (MASH units) and the idea earned him the rank of brigadier general and a Distinguished Service Medal. Gen. Carroll grew up in East St. Louis and was the oldest living graduate of the St. Louis University Medical School, having graduated in 1914. He retired from the Army in 1946 after 31 years of service, and became assistant dean of the St. Louis University Medical School. Gen. Carroll was a member of the St. Louis Metropolitan Medical Society.

- **Irwin T. Craig, M.D.**, died January 16, 1988 at the age of 74. Dr. Craig, an obstetrician/gynecologist, practiced medicine in Joplin at St. John's Medical Center for 37 years before retiring in 1976. He delivered an estimated 9,000 babies between 1939 and 1972. He obtained his medical degree in 1937 at the Tulane University Medical School. Dr. Craig was a member of the Jasper County Medical Society.

- **Mitchell D. Johnson, M.D.**, died December 28, 1987 at the age of 73. Dr. Johnson, a surgeon, practiced medicine in the Ferguson area for 37 years. He retired in 1983. In 1940, he obtained his medical degree from the Loyola University School of Medicine. He was chief resident in surgery and orthopedics at the old St. Louis City Hospital from 1940 to 1944, and in 1978, he was honored by the Ferguson Kiwanis Club as Outstanding Citizen of the Year. Dr. Johnson was a member of the St. Louis Metropolitan Medical Society.

- **Joseph Murney, M.D.**, died December 27, 1987 at the age of 67. Dr. Murney, a general and thoracic surgeon, served on the medical staff at St. John's Mercy Hospital since 1964, and served as chairman of the department of surgery until his death. He obtained his medical degree at St. Louis University in 1953. Dr. Murney was a member of the St. Louis Metropolitan Medical Society.

- **William B. O'Connor, M.D.**, died December 10, 1987 at the age of 73. Dr. O'Connor, a dermatologist, practiced medicine in St. Joseph for 33 years before retiring in 1983. He served as a major in the U.S. Army Medical Corps in World War II. He was awarded the Bronze Star, the European Theatre Ribbon with four battle stars, the combat medic badge. He obtained his medical degree at the St. Louis University School of Medicine in 1942. Dr. O'Connor was a member of the Buchanan County Medical Society.

- **William A. Stephens, M.D.**, died December 20, 1987 at the age of 84. Dr. Stephens, an orthopedic surgeon, practiced medicine in St. Louis. He obtained his medical degree at the Washington University School of Medicine in 1935. Dr. Stephens was a member of the St. Louis Metropolitan Medical Society.

- **George H. Thiele, M.D.**, died September 26, 1987 at the age of 91. Dr. Thiele, a surgeon, practiced medicine at St. Luke's, General, St. Joseph and Research hospitals in Kansas City before his retirement in 1970. He had been an editorial consultant for *The American Family Physician* magazine. He obtained his medical degree at the University of Kansas in 1920. Dr. Thiele was a member of the Metropolitan Medical Society of Greater Kansas City.

- **D. L. Thurston, M.D.**, died December 25, 1987 at the age of 77. Dr. Thurston, a pediatrician, practiced medicine in the St. Louis area for over 45 years, before retiring in 1985. He was an enthusiastic gardner and cultivated about 200 varities of roses. He obtained his medical degree at the Washington University School of Medicine in 1937. Dr. Thurston was a member of the St. Louis Metropolitan Medical Society.

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March

14 **"2nd Annual Daniel R. Biello Memorial Lecture: 'Cardiovascular Nuclear Medicine' "** — Location: Mallinckrodt Institute of Radiology, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

16 **Sixth Annual Symposium on Geriatric Medicine** — Location: Breckinridge Inn Frontenac, St. Louis, MO. Contact: Anita Herbst, CME coordinator, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

24-26 **Midwest Regional Oncology Conference III** — Location: Hyatt Regency Crown Center, Kansas City. Contact: Beth Paul, Conference Planner, Center for Continuing Education, St. Luke's Hospital of Kansas City, Wornall Road at 44th, Kansas City, MO 64111. 816/932-2301.

April

11 **"Leroy Sante Lecture"** — Location: St. Louis University, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

14-15 **Respiratory Critical Care** — Location: Holiday Inn Executive Center, Columbia, MO. contact: Barry Kling, University of Missouri-Columbia, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

15 **Lymphoma Update 1988: New Diagnostic and Treatment Strategies** — Location: Jewish Hospital at Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

15-16 **Frontiers in Endoscopy** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

20-21 **Advanced Contact Lens Seminar** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

26-29 **Clinical Allergy — Inhalent and Food Sensitivity "Review and How-to"** — Location: Alameda Plaza, Kansas City, MO. Contact: Missouri Postgraduate Course in Allergy, Inc., 24-26 S. Main St., Suite A, Liberty, MO 64068. 816/781-0902.

28-29 **15th Annual Symposium on Obstetrics and Gynecology** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

29-30 **"Eating Disorders"** — Location: Hyatt Regency, Kansas City, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

May

9 **"Direct Digital Radiography"** — Location: Mallinckrodt Institute of Radiology, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

11-12 **Current Management in Critical Care** — Location: Alameda Plaza Hotel, Kansas City, MO. Contact: Linda Smutz, Kansas City Southwest Clinical Society, 222 W. Gregory Blvd., Suite 323, Kansas City, MO 64114. 816/523-3383.

12-13 **Pediatric Advance Cardiac and Trauma Life Support Provider Course** — Location: Cardinal Glennon Children's Hospital, St. Louis. Contact: Virginia Engel, Nursing Service Administration, Cardinal Glennon Children's Hospital, 314/577-5657.

13-15 **"Emergency Room Legal Environment: Medicine's Response"** — Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, St. Louis University School of Medicine, CME Office, 1402 S. Grand, St. Louis, MO 63104.

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May (Cont.)

19-21 **Progress in Clinical Pediatrics IV: Advances in Hematology and Oncology and Transplantation in Children: The State of the Art** — Location: St. Louis Children's Hospital at Washington University Medical Center, St. Louis, MO. Contact: Sharon Thiemann, CME Services, Children's Hospital, 400 South Kingshighway, St. Louis, MO 63110 314/454-2231.

21 **"3rd Annual One-Day Anesthesia Conference"** — Location: Detrick Auditorium, Christian Hospital NE. Contact: Department of Anesthesiology, Christian Hospital NE-NW, 11133 Dunn Road, St. Louis, MO 63136. 314/355-2300, ext. 5022.

June

10-11 **"7th Annual Glennon Update Medical Genetics and Pediatric Cardiology"** — Location: Marriott Pavilion Hotel, St. Louis. Contact: Mary Hummert, Educational Coordinator, Room 202, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5638.

18-23 **Allergy: Back to the Basics in the Tetons** — Location: Jackson, WY. Contact: Missouri Postgraduate Course in Allergy, Inc., 24-26 S. Main St., Suite A, Liberty, MO 64068. 816/781-0902.

25-27 **Advanced Cardiac Life Support Provider Course** — Location: St. Louis University Medical Center, Learning Resources Center. Contact: Anita Herbst, CME coordinator, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

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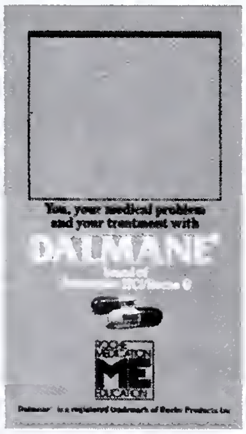
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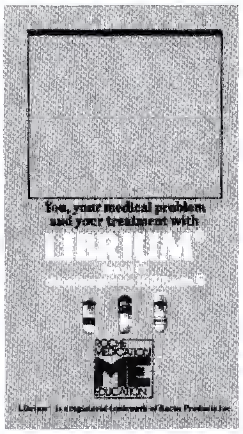
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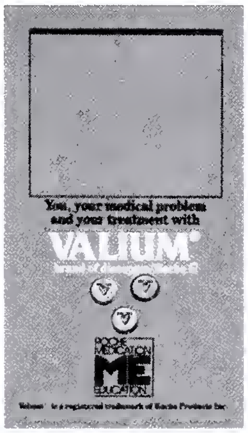
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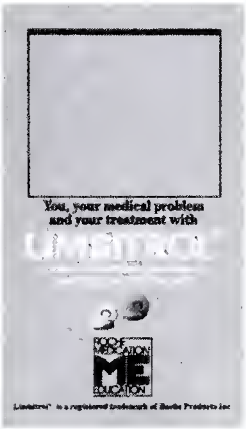
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Journal of the Missouri State Medical Association
April 1988

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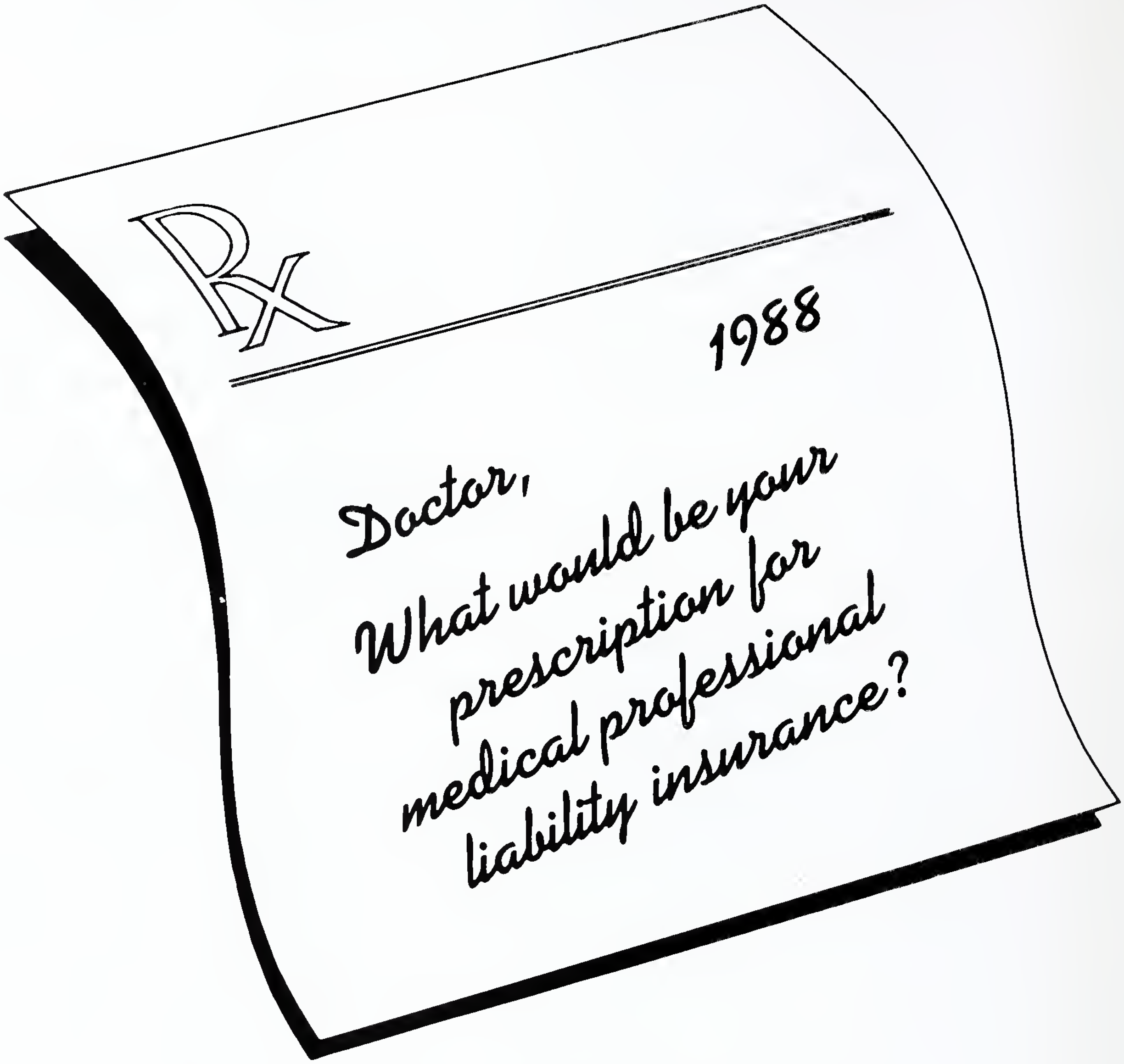
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Cover

"**Dan Quisenberry,**" 11″ x 15″ watercolor by **Eugene Bortnick, M.D.**, a plastic and reconstructive surgeon in *Kansas City, Missouri.* Dr. Bortnick's 1985 painting of the Kansas City Royal's ace relief pitcher incorporates a dry brush technique with traditional watercolor on rag paper.

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MSMA Progress Notes

MSMA honors Editor Burkey

The April *Missouri Medicine* marks the final issue under the direction of Jordan W. Burkey, M.D. The Springfield otolaryngologist has served as editor since 1982 and is a member of the American Medical Writers Association (AMWA).

During his tenure as editor, *Missouri Medicine* underwent a complete graphic redesign resulting in a Sandoz Pharmaceutical award for first place in magazine design and editorial qualities in 1986. The journal continues to be recognized for excellence as it received honorable mention in the Sandoz Medical Journal Competition for the succeeding two years.

At the 130th Annual Convention of the MSMA, Dr. Burkey was presented with a plaque recognizing his contribution to the editorial excellence of the journal and for appreciation of his service. Dr. Burkey will continue to serve *Missouri Medicine* as editor emeritus and will represent the journal during the AMWA Annual Meeting this fall in Philadelphia. His final editorial appears on page 183.

Donald G. Sessions, M.D., an otolaryngologist from St. Louis will take over the duties of editor for the journal with the May issue and Ramona Chapman, M.D., a Joplin oncologist, will serve as associate editor. ■

Thomas J. Cooper, M.D. installed as MSMA President

On Saturday, March 19, at the 130th MSMA Annual Convention, Thomas J. Cooper, M.D., was installed as the 1988 MSMA President.

Dr. Cooper is a pathologist from St. Louis. He received his medical degree in 1946 from the University of Louisville, Louisville, Ky. He completed his internship and residency at the University of Iowa, Iowa City.

Dr. Cooper brings to the presidency of the Missouri State Medical Association a background of leadership and active participation in organized medicine and community affairs. In 1982, he served as President of the St. Louis Metropolitan Medical Society. He served the Society as Councilor in the years preceding his election to the presidency.

Dr. Cooper is also a past president of the St. Louis Pathological Society, the Missouri State Pathology Society, and the Missouri Patient Care Review Foundation. He is a fellow of the American Society of Clinical Pathologists and of the College of American Pathologists.

In the Missouri State Medical Association, Dr. Cooper has served on the Council since 1978. He was elected Chairman of the Council in 1986.

Active in his community, he is a member of the Board and Chairman of the Medical Advisory Committee of the St. Louis Chapter, American Red Cross. He also sits on the Boards of St. Louis Blue Cross/Blue Shield, the Missouri Medical Political Action Committee and MOMEDICO.

Dr. Cooper has four children. Thomas Jr. is a pathology resident living in Long Beach, Calif. He is married and has two children. Barbara Ann is a nurse in Boulder, Colo. She is married and has one child. John works the Cooper Farm in Libertyville, Mo. Mary is a veterinary student in Fort Collins, Colo.

Dr. Cooper lives in south St. Louis County with his wife, Barbara, surrounded by plants and animals. ■

Missouri Register update

Permanent physician licensure. In the March 1 *Missouri Register*, a proposed rule by the State Board of Healing Arts stated several requirements for the permanent licensing of physicians and surgeons in the state of Missouri.

The rule requires each applicant for a permanent license as a physician surgeon to be examined by the Board.

An applicant must receive a passing score on a licensing examination administered in the United States or the District of Columbia or receive a certificate of the National Board of Medical Examiners of the United States or a certificate of the National Board of Examiners for Osteopathic Physicians and Surgeons, chartered under the laws of the state of Indiana.

To receive a passing score, the applicant must achieve a weighted average score of not less than 75% on the Federal Licensing Examination (FLEX) or an average score of not less than 75% on any other state licensing exam.

The board shall not issue a permanent physician or surgeon license or allow the Missouri State Board examination to be administered to any applicant who has failed to achieve a passing score cumulatively three (3) times or more on licensing exams administered in the United States or the District of Columbia.

The board shall not allow any applicant, who has failed to achieve a passing score cumulatively two (2) times or more on licensing exams administered in the United States or the District of Columbia, to take the licensing exam administered by the board until the applicant has successfully completed one (1) additional year of postgraduate training following the second unsuccessful attempt to pass the licensing exam.

The board may waive the provisions of section three (3) of this rule if the applicant is American Specialty Board certified, licensed to practice as a physician and surgeon in another state of the United States or the District of Columbia and the applicant has achieved a passing score on a licensing exam administered in a state or territory of the United States or the District of Columbia. ■

Child Abuse and Neglect Program

The Missouri Department of Social Services will be holding its 9th Missouri conference on Child Abuse and Neglect at the Columbia Holiday Inn Executive Center on May 4-6, 1988. The MSMA will be supporting the conference as a cooperating organization. For more information, please contact Marie Williams, Conference Publicity Chairman, at 314/751-8951. ■

Warren C. Lovinger, Jr., M.D. Citizen of the Year

The Nevada Rotary Club selected Warren C. Lovinger, Jr., M.D., as Citizen of the Year for 1987, on January 21, 1988.

Dr. Lovinger received his medical degree from Johns Hopkins University School of Medicine in 1977. He completed his internship and residency at Barnes Hospital, Washington University School of Medicine, St. Louis.

Dr. Lovinger has practiced internal medicine in Nevada since 1980. He has been active in many organizations including Citizens State Bank Board of Directors, First Presbyterian Church of Nevada, Rotary Club of Nevada, Nevada-Vernon County Chamber of Commerce, and United Community Funds of Vernon County.

His medical field memberships include MSMA, AMA, Nevada City Hospital Medical staff, Heartland Hospital medical staff, Christian Medical Society, West Central Missouri Medical Society, American College of Physicians, American Society of Internal Medicine, and Moore-Few Nursing Home medical director. ■

HCFA yields to AMA appeals

Aggressive AMA lobbying again paid off for the profession in March. HCFA announced a major process change to correct the problems of premature carrier claims denials and improper issuance of refund notices under new "medically unnecessary" provisions of OBRA 1986.

Last month HCFA said it would issue new instructions for Medicare carriers that will require them to contact physicians and ask for additional information **before** denying any claim and triggering a refund notice to the patient and physician.

HCFA said those instructions, with an expected effective date of April 1, would be sent to carriers in March.

Physicians who receive refund notices should promptly file an appeal of any medically unnecessary denial and the refund requirement. The appeal should contain thorough documentation of the necessity of the service in question. If there is any doubt regarding which services were denied, or the basis for the denial, MSMA members should immediately contact the Medical Review Department of their Medicare carrier: General American at 1/800-392-3070 or Blue Cross/Blue Shield for Medicare Part B at 1/800-654-9629.

HCFA is developing a revised refund notice that will clearly identify the service(s) in question and the basis for the denial. This will include a point of contact at the carrier's office for development of a physician appeal. The previous letter was criticized for being offensive as well as vague. ■

Accidental deaths down; cancer deaths up

Provisional data for 1987 show that fewer Missourians died last year from accidental causes, including motor vehicle accidents, than ever before. In 1987, 2,030 Missourians lost their lives in accidental deaths, a rate of 39.8 deaths per 100,000 population. Fifteen years ago, the accidental death rate in Missouri was 58.6. In 1977, the rate was 49.1.

Much of the decrease in accidental deaths last year in Missouri is attributable to fewer deaths on Missouri's roads. Ninety fewer Missourians (1,050) lost their lives in motor vehicle accidents in 1987 than in 1986 (1,140).

The number of Missourians who died from cancer increased for the third straight year in 1987, according to provisional data released by the Missouri Department of Health.

Since 1972, the cancer death rate in Missouri has climbed steadily upward with the exception of minor decreases in 1973, 1977 and 1984. Nearly 60% of the jump in cancer deaths in the last 10 years is due to increases in lung cancer deaths.

Last year, 11,100 Missourians died of cancer, the second leading cause of death in Missouri. Of those, 3,175 (28%) were lung cancer deaths. Ten years ago (1977), 9,378 Missourians died of cancer. Of those, 2,184 (23%) were lung cancer deaths.

Studies by the Federal Office on Smoking and Health and the National Cancer Institute have found that smoking is responsible for an estimated 30% of cancer deaths and 16% of all deaths (heart, stroke, chronic pulmonary disease, etc). Using those figures, approximately 8,000 Missourians died last year from smoking-related causes.

The majority of scientific studies examining the link between involuntary ("second-hand") smoking and lung cancer have shown a positive correlation between the two. In addition, involuntary smoking may also make the symptoms of coronary heart disease more severe. Preliminary evidence shows that women exposed to the smoke of their husband's cigarettes have an increased risk of heart attack.

Nearly 18,300 Missourians died last year of heart disease, the leading cause of death in the state. The death rate for heart disease (per 100,000 population) was 358.3 in 1987, compared with 380.5 in 1977, a 6% decline.

Although the heart disease death rate has slowly declined over recent years, the death rate due to stroke has dropped nearly 30% since 1977. Last year, 3,780 Missourians died of strokes, an average of 74.1 per 100,000 population. Ten years ago, the stroke rate per 100,000 population was 105.1.

In the area of communicable diseases, Missouri has reported a decline in the number of gonorrhea cases each year since 1981 when 22,249 cases were reported. In 1987, 16,491 cases were reported, a decrease of 2,221 cases from 1986 when 18,712 cases were reported. Contact tracing and partner notification continues to reduce the incidence of sexually transmitted gonorrhea and syphilis. Penicillinase Producing *Neisseria gonorrhoeae* (PPNG), a resistant strain of gonorrhea, increased to 208 cases in 1987 from 60 cases in 1986. The number of reported syphilis cases dropped 33% in 1987. In 1986, 494 cases were reported; in 1987, only 328 cases were reported.

Large increases were seen in the numbers of reported hepatitis A and shigellosis cases during 1987. Shigellosis showed the largest percentage increase, from 89 cases in 1986 to 471 cases in 1987, a 429% increase.

Hepatitis A rose from 126 cases in 1986 to 562 in 1987, a 346% increase. This is the highest number reported since 1973. In contrast, hepatitis B reports went up only 9.5%, from 420 cases in 1986 to 460 cases in 1987.

Reports of *Haemophilus influenzae* type b (Hib) meningitis declined by almost 24%, from 172 in 1986 to 131 in 1987. The vaccine against Hib was added to the state's vaccine program in October 1986. More than 17,500 doses were administered in 1987. In addition, 1,200 children and 250 adults received antibiotic prophylaxis from the Missouri Department of Health to prevent secondary cases of Hib.

The largest measles outbreak in Missouri since 1979 occurred in 1987 with 190 cases, up 494% from the 32 cases reported in 1986. The majority of the cases in 1987 stemmed from outbreaks in the mid-Missouri area.

Although the number of tuberculosis cases in Missouri increased by only one in 1987, the increase represents the first time since 1955 that the number of tuberculosis cases grew two years in a row. In 1987, 339 cases were reported compared to 338 in 1986 and 311 in 1985. Nationally, increases in tuberculosis cases have been linked to the AIDS epidemic, but in Missouri only 10 cases have been associated with AIDS.

The number of AIDS cases in Missouri climbed dramatically in 1987, with a 163% increase from 1986. More AIDS cases were reported in Missouri in 1987 than were reported in the combined years 1982-1986. In Missouri, in 1982 there was one reported AIDS case. In 1983, six. In 1984, 28. In 1985, there were 52 reported AIDS cases. In 1986, 91. In 1987, 239 cases of AIDS were reported and 85 Missourians died of the deadly disease. In the first two months of 1988, 21 Missourians died of AIDS, while 54 more Missourians with the disease were reported.

Missouri's infant mortality rate dropped in 1987, matching the 1985 record low of 10.2 deaths per 1,000 live births. ■

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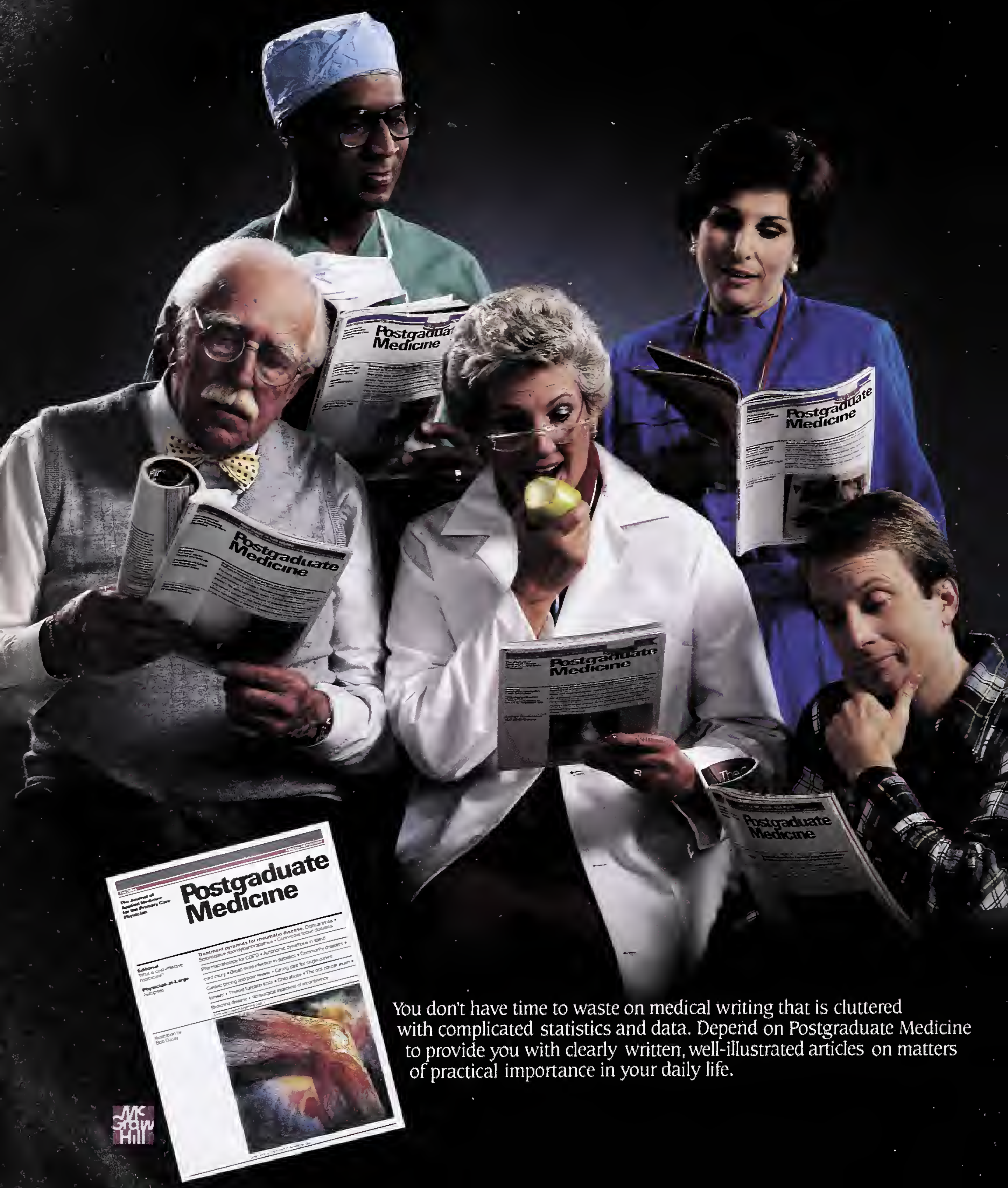
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EDITOR'S DESK

by Jordan W. Burkey, M.D.

This editorship has perhaps filled a span between personal stability and senility.

Closing Comments

With this issue the editor has completed a half a dozen years managing the scientific content of *Missouri Medicine.* The purely journalistic and typographic aspects have been in the good hands of Jean Duensing, Laurel Ellison, and now Susan Gold. We give them thanks for all the good work they have done, along with Royal Cooper, Kay Dinolfo, and the rest of the medical association staff.

The Publications Committee and Editorial Board members are the poorly recognized, unpaid laborers in this endeavor, and we salute them on behalf of all readers. Dr. Donald Sessions of St. Louis will be taking over next month. He is a leader in academic and clinical medicine at Washington University, has had experience editing *St. Louis Metropolitan Medicine,* and will be a worthwhile editor for *Missouri Medicine.*

This editorship has perhaps filled a span between personal stability and senility. One has to be a bit of an autocrat to edit any journal such as this — our rejection rate of submitted articles runs at about the same 50% level as other comparable publications. Putting the magazine together in an interesting and scientifically proper manner is the most important job to be done; writing of editorials is both a challenge and a joy. In cleaning out the desk as the editor's job winds down, we found a pile of old clippings and notes ready to be thrown away. These contain information and ideas never put to use — representing a number of editorials which for various reasons were never written:

1. *The glories of Medicaid and Medicare.* It's hard to fill a page with pure sarcasm.
2. *The DRG system in action.* Bureaucratic skullduggery too complex to tackle.
3. *Hospital record rooms.* If we don't talk about them, maybe they'll go away.
4. *Explain the U.S. medical malpractice situation to a person from another continent.* As a loyal American citizen, we would hate to admit our quandary even by a negative discussion.
5. *The proper role of women in medicine.* Frankly, no guts to tackle this one.
6. *Nurses vs. physicians in patient care.* Ditto.

Six years ago we wrote a few lines encouraging members of MSMA to study *Missouri Medicine,* use it and enjoy it. These final words are basically the same. We hope you will keep reading and learning from the journal. ■

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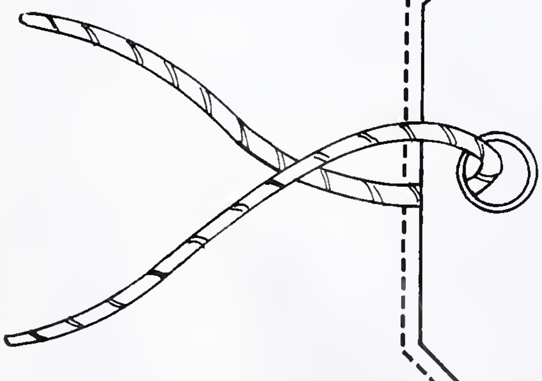

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PRESIDENT'S PAGE

by T. J. Cooper, M.D.

MSMA's Doctor Card Program

Credit where credit is due

All too frequently physicians as a group seem to have considerable adverse press.

We find editorials and cartoons that indicate that we practice "wallet" biopsies at the onset of each patient visit. In truth, most physicians take into consideration the financial status of their patients along with the myriad other concerns that go into arriving at a diagnosis.

At present, approximately 30% of physicians take Medicare assignment as payment, in full for all care, and 70% of all Medicare payments are for assignment. So, the majority of physicians do take Medicare assignment on a case-by-case basis.

In order to make it easier for the patients, and for their physicians, the Council of the Missouri State Medical Association is developing a Doctor Card program. Every Medicare patient whose income is less than one and one-half times the poverty level is eligible to obtain a card issued by MSMA. The card enables individuals to receive care from MSMA members who sign up with the program.

Upon presentation of the card, the physicians will accept Medicare assignment, with only the 20% copayment mandated by Congress collected from the patient. A plaque will be provided to each participating physician for display, and a list of the participating physicians will be available to senior citizen centers, the AARP and other interested parties.

More information will be available as the program progresses. ■

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Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

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References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Auxiliary Message

by Eileen Dyer
MSMA Auxiliary
President

We Missourians are proud of our physicians so March 30 was spent honoring our dedicated spouses and friends in medicine.

Doctors' Day in Missouri

March was indeed a busy month for the Auxiliary as we gathered together in Kansas City for our annual meeting. However, the end of the month found us busy back home preparing for the annual celebration of Doctors' Day.

This day of recognition for the men and women of medicine has been celebrated since 1933 when Eudora Almond Brown initiated the idea in her home auxiliary of Barrow County, Georgia. March 30th was selected because on that date in 1842 the famous Georgian Dr. Crawford W. Long became the first physician to use ether as an anesthesia during a surgery.

Over the years, auxiliaries have used a vast array of service projects, parties and proclamations to promote community awareness of doctors' services in their neighborhoods, churches and medical facilities. Common projects include blood drives, donating medical equipment to hospitals and clinics, public relations feature stories in local media as well as visiting retired physicians. When possible, auxilians incorporate the red carnation into their Doctors' Day celebration as this flower is the national symbol for the event.

We Missourians are proud of our physicians. We honor their dedication, patience, compassion and the high quality of medical care they provide to all citizens.

Doctors' Day is your day, and through our special celebrations we hope to say, "Thank you for a job well done." ■

Letters to the Editor

Support groups important

Dear Dr. Burkey:

Your editorial, "Medicine et al" which appeared in the January, 1988 issue of *Missouri Medicine* voices an unfortunate view of the role of patient support groups. I am a medical oncologist who has fostered several cancer support programs and am favorably impressed with the important, unique services supplied by trained volunteers in such groups.

No, cancer support groups were not started because of the perception that physicians ignored their patients' needs, but because physicians were perceptive enough to work with their patients to try to satisfy those needs. Cancer patients frequently face problems that surpass the advice a physician may supply. I doubt that a physician could substitute for the matched patient-volunteer visits of the CanSurMount program sponsored by the American Cancer Society. Physicians do not have the time or even the experience to be able to deal with many practical or emotional problems of cancer. The women who participate in the S.H.A.R.E. program (breast cancer support) at Barnes and St. Luke's Hospitals in the St. Louis area find many unmet informational and emotional needs satisfied with the help of physicians, nurses, social workers, and other patients.

Support groups need direction and professional advice, however, and this is the critical role that physicians can play. The Missouri Division of the American Cancer Society and many Missouri hospitals have successfully facilitated patient support groups with professional direction for many years. I agree that physicians must remain in charge of the care of our patients.

Participation in a support group is an opportunity for doctors to ensure that a responsible, sensitive, and well-informed service is delivered by a support group.

Sincerely,
Gary A. Ratkin, M.D.
St. Louis, MO

Dixon's comments supported

Dear Dr. Burkey:

Thank you for printing G. David Dixon, M.D.'s comments in the March edition of *Missouri Medicine.*

I could not agree more with his assessment of the lack of will of a certain segment of the American population. Undoubtedly these people were not privileged to view the dismembered limbs of innocent people where they were hung up by the invading Viet Cong. Somehow the loud, apathetic few have reversed our country's traditional role of standing for and enforcing the inalienable rights of our neighbors. Perhaps if this had happened to these dissenters' next-door neighbors rather than their neighbors in the human race around the globe, they would have been more willing to join the fight and persevere.

Sincerely,
James W. Gieselmann, M.D.
Poplar Bluff, MO

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- **Comments**
- **Suggestions**
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An Invitation . . .

The Editorial Board of *Missouri Medicine* invites the members of the Missouri State Medical Association to submit examples of their art work for publication on the cover of *Missouri Medicine*. Color photographs, preferably transparencies, as well as photographs of paintings, drawings, sculpture, ceramics, jewelry, etc. are all welcome. There is no limit as to subject, although pictures of Missouri or subjects topical to a month or season may have a slight advantage. Please submit entries to "Cover," *Missouri Medicine*, P.O. Box 1028, Jefferson City, MO 65102.

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3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g , spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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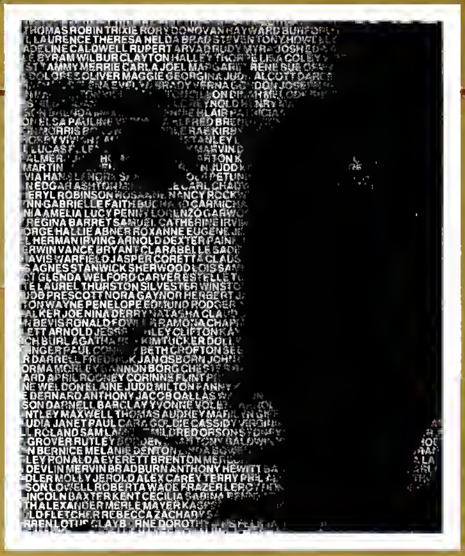

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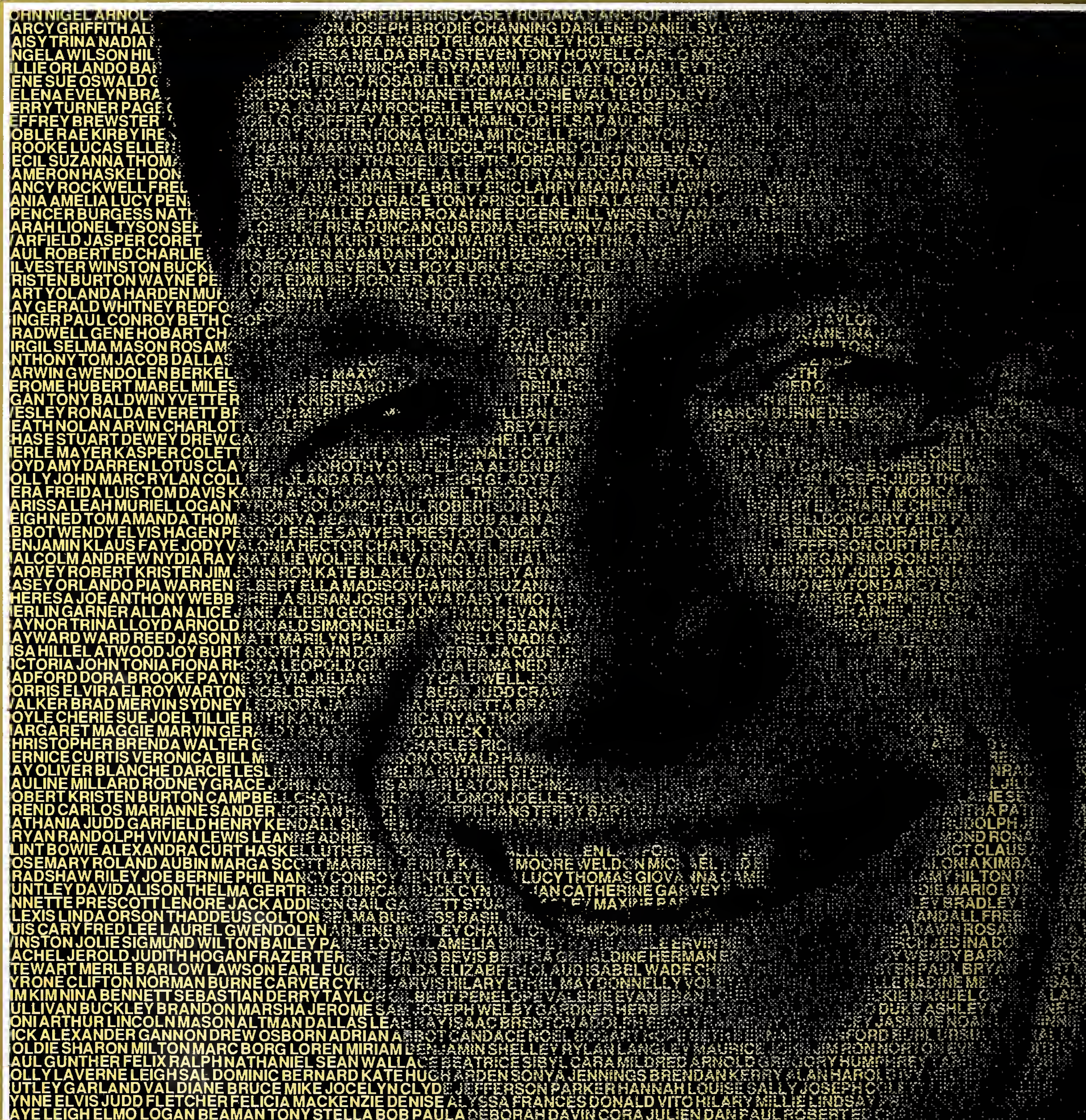

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BBOT WENDY ELVIS HAGEN PEGGY LESLIE SAWYER PRESTON DOUGLA
ENJAMIN KLAUS FAYE JODY VALONIA HECTOR CHARLTON AXEL
ALCOLM ANDREW NYDIA RAY NATALIE WOLFE KELLY ARNOLD
ARVEY ROBERT KRISTEN JIM JOHN RON KATE BLAKE DAVIN BARRY
ASEY ORLANDO PIA WARREN ELBERT ELLA MADISON HARMON SUZANNE
HERESA JOE ANTHONY WEBB SHEILA SUSAN JOSH SYLVIA DAISY
ERLIN GARNER ALLAN ALICE JANE AILEEN GEORGE
AYNOR TRINA LLOYD ARNOLD RONALD SIMON NELDA
AYWARD WARD REED JASON MATT MARILYN PALMER
ISA HILLEL ATWOOD JOY BURT BOOTH ARVIN
ICTORIA JOHN TONIA FIONA RHODA LEOPOLD
ADFORD DORA BROOKE PAYNE SYLVIA JULIAN
ORRIS ELVIRA ELROY WARTON NOEL DEREK
ALKER BRAD MERVIN SYDNEY LENORA
OYLE CHERIE SUE JOEL TILLIE RUTH
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ERNICE CURTIS VERONICA BILL M
AY OLIVER BLANCHE DARCIE LESL
AULINE MILLARD RODNEY GRACE JOHN
OBERT KRISTEN BURTON CAMPBELL CHATHAM
REND CARLOS MARIANNE SANDER JORDAN
ATHANIA JUDD GARFIELD HENRY KENDALL
RYAN RANDOLPH VIVIAN LEWIS LEANNE ADRIEL
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UNTLEY DAVID ALISON THELMA GERTRUDE DUNCAN
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TEWART MERLE BARLOW LAWSON EARL EUGENE GILDA ELIZABETH CLAUD ISABEL WADE
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LLEEN DWIGHT MITCH
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INE LORNA ROBERTA NOBLE TOM SABIN
T MIA BARTLETT BEAU DINAH JIM FRITZ D
INE CECILIA TAMARA BEN ROSABELLE J
LE SIMPSON BERNARD ERROL CORETTA
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In a recent survey, 4,120 participating physicians gave us their views[1] on INDERAL LA in the treatment of hypertension, angina and migraine.

INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated INDERAL LA good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe INDERAL LA.

INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with INDERAL LA to be as good as, or better than, other beta blockers.

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

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INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES
60, 80, 120, 160 mg

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

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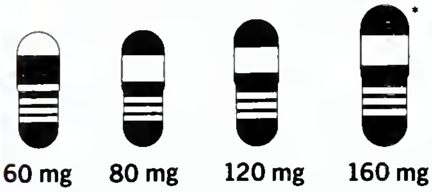

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose ot INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting trom the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those ot two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need tor retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade tor a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management ot hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated tor the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis ot common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is usetul in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction ot the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart tailure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close tollow-up in patients with a history ot tailure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial intarction, tollowing *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance ot INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation ot beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal ot beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return o increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardi contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, *phenobarbitone*, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels o both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of lertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in anima studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be use during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised whe INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarel required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time an place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching an sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, an Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associate with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in sustained-release capsule for administration once daily. If patients are switched from INDERA Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect i maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAI INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessar especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL L once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg onc daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage i 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed fo full hypertensive response to a given dosage is variable and may range from a few days to sever weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once dail dosage should be gradually increased at three- to seven-day intervals until optimal response i obtained. Although individual patients may respond at any dosage level, the average optimal dosag appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 m per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (se WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once dail The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually t achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to si weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may b advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited t permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

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MSMA Member Viewpoint

How About This Radiation?

Wilfred E. Wooldridge, M.D.

Ever since the Hiroshima bomb, radiation has received bad press. Nothing good is said about it anymore. In these days radiation treatment is both given, and received, with a sense of futility — a last resort, not good, but the best of a bad deal. I suppose this melancholy attitude of both patient and physician has some justification because radiation now seems increasingly used in hopeless situations. Palliation, at best.

But it hasn't always been that way. Before the Hiroshima bomb, treatment with radiation wasn't regarded so morosely. Then, before chemotherapy, it was given with almost gay optimism, a genuine hope of cure, and no apologies beforehand.

Even in those days, almost now regarded as pre-history, radiation was acknowledged as a destructive force having some degree of selective action against bad cells with less damage to healthy cells. With good luck, and proper selection, the bad cells were eliminated and the healthy ones minimally hurt. With this attitude, a fellow could justify radiation. It was easy to think something good might come of it.

But no more! Today radiation, even in minute amounts, is all bad and not to be discussed in polite society, if we believe what we hear.

I wonder? I do wonder, and what causes me to wonder is that I am not at all sure such a conclusion has been borne out by the orderly process of evolution of the species, fortunately beyond the tinkering of armchair authorities.

To appreciate what I mean it is necessary to understand the concept of radiation half-life. This is defined as the period of time required for a given amount of a radioactive substance to deteriorate to 50% of its original strength. With some artificially-produced radio-isotopes this half-life may be measured in seconds, or even in milliseconds. In most naturally-occurring radioactive substances, however, half-lives are extremely long, or there wouldn't be any of significance remaining today. Radium, for instance, has a half-life of 1956 years and has, presumably, been undergoing deterioration at that fixed rate since the world began.

The very fact that any of these naturally-occurring radioactive substances remain at all, (if one extrapolates such half-lives back untold eons), means this old earth must have been an absolute cauldron of radioactivity when early life forms plodded along and evolved in splendid and orderly progression. That progression took place inexorably, efficiently, and with gradual increase in complexity of organisms. This progression we now consider impossible in the presence of significant ionizing energy.

Yet, here we are, unless we are all wrong in our ideas of the evolution of life. In spite of our neat theories, life seems to have evolved in an atmosphere of radioactivity as hot as a depot stove. By comparison, our present background radiation is almost nonexistent and yet we now fret about every electron knocked out of orbit being a horrible harbinger of castrophe.

Quite possibly, this musing has basic flaws. My problem is that I can't think of them. Many times, I have asked these questions of people who should know something about this subject. The response has been either a blank stare, noncommital dismissal or admission by a forthright few that they didn't know, either.

So, we return to the original question, not entirely in jest. Is every vestige of radiation really as poisonous as we have come to regard it in the last 40 years? ■

The author served as editor of MISSOURI MEDICINE *from 1978-1982. He is a retired dermatologist in Springfield who writes a monthly medical column for the* Springfield Leader-Press.

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Temporary Total Heart Bypass Using a Vortex Centrifugal Pump

Lawrence R. McBride, M.D., Andrew C. Fiore, M.D., Keith S. Naunheim, M.D., D. Glenn Pennington, M.D., A. Rashid Qureshi, M.D., and George C. Kaiser, M.D.
St. Louis, Missouri

Patients who suffer ventricular failure following cardiotomy can now be treated using one of several external ventricular assist devices. The authors report a patient who recovered from a perioperative myocardial infarction through the use of two external pumps.

Coronary artery bypass is frequently performed in community hospitals. There has been a trend toward operating upon older patients with extensive coronary atherosclerosis and left ventricular dysfunction.[1] Despite improved techniques for myocardial preservation, postoperative ventricular failure refractory to drugs and intra-aortic balloon counterpulsation occurs in 0.6% to 1.5% of the patients.[2] Conventional therapy, such as cardiotonic drugs, pacemakers and the intra-aortic balloon, have distinct limitations. In 1964 Spencer and his associates first successfully utilized left-sided heart bypass to support a patient with post-cardiotomy cardiogenic shock.[3] Since then, a variety of temporary ventricular assist devices have been developed.[4-7] The Bio-Medicus vortex centrifugal pump (Bio Pump, Bio-Medicus, Inc., Minnetonka, Minn.), one of the simpler devices in design and ease of insertion, has been successfully used in several centers to treat post-cardiotomy ventricular failure.[8, 9] This paracorporeal pump consists of rotator cones made of pyrolytic carbon, which impart a circular motion to blood, generating a centrifugal pressure and nonpulsatile flow. In this report, we describe a patient who suffered a perioperative infarction and was successfully supported with the Bio-Medicus vortex centrifugal pump.

Case Report

A 44-year-old man who was admitted to St. Mary's Health Center, St. Louis, for medically refractory angina underwent coronary angiography. His risk factors included a family history of coronary artery disease and smoking two packs of cigarettes a day. Coronary angiograms demonstrated severe diffuse triple vessel disease. His preoperative left ventricular function was judged to be normal. Using intermittent cold potassium blood cardioplegia and systemic hypothermia to 28°C, bypass grafting to six coronary arteries was performed.[10] All the vessels were diffusely diseased and ranged in diameter from 1.0 to 1.5 mm. After warming to 37°C, the patient was weaned from cardiopulmonary bypass using dopamine (5 mcg/kg/min). Flows of 56 mL/min and 74 mL/min were measured with an electromagnetic flow probe in the left internal mammary artery and the sequential vein graft respectively. The patient remained hemodynamically stable until wound closure was begun, when he suddenly became hypotensive with a cardiac index of 1.5 liters/min/m^2 and a mixed venous oxygen saturation of 55%. Cardiopulmonary bypass was rapidly reinstituted after the patient was reheparinized. Despite maximal inotropic support and

Table 1

Hemodynamic Profile During Biventricular Circulatory Support

Hour	CVP	LA	MAP	Flow (liter/min) Left Side	Flow (liter/min) Right Side	Urine (mL/hr)
0	10	4	60	4.5	5.0	184
3	9	6	75	3.6	4.9	331
6	12	7	70	4.0	4.0	320
9	9	7	75	4.4	5.1	145
12	16	11	75	4.1	6.1	141
15	12	9	73	4.1	6.1	135
18	9	10	77	4.1	5.4	96
21	8	8	65	3.0	3.0	71

CVP, central venous pressure, mm Hg
LA, left atrial pressure, mm Hg
MAP, mean aortic pressure, mm Hg
Values expressed as a mean for each three-hour interval

the use of the intra-aortic balloon pump, the patient could not be weaned from cardiopulmonary bypass. When attempts were made to separate the patient from the extracorporeal circuit, the pulmonary artery diastolic pressure rose to 30 mm Hg and the central venous pressure rose to 25 mm Hg. Left-sided heart bypass was accomplished with a Bio-Medicus vortex centrifugal pump utilizing a 32 French Bardic venous cannula in the dome of the left atrium, and a 21 French THI arterial cannula in the ascending aorta. With adequate mechanical support of the left ventricle, right-sided heart bypass was then instituted with a second Bio-Medicus vortex centrifugal pump. The right atrium was cannulated with a 36 French and the pulmonary artery with a 22 French Bardic cannula. The patient was then easily weaned from cardiopulmonary bypass. The centrifugal pumps were set to maintain a cardiac index of 2-4 liters/min/m.^{2} This resulted in biatrial pressures of 5-10 mm Hg. The hemodynamic profile during the 21 hours of circulatory support is summarized in Table 1. The intra-aortic balloon pump provided counterpulsation at a ratio of 2:1. In this environment, coronary perfusion was maximized and left ventricular afterload reduced. The pharmacologic support during this period is summarized in Table 2. An activated clotting time of 150 seconds was maintained with a continuous heparin drip. Clotting factors were restored by specific blood products as needed. The coagulation profile is summarized in Table 3. Urine output remained above 0.5 mL/kg/min. Over the next 21 hours, myocardial function improved to the extent that flow from both centrifugal pumps could be reduced to low levels. The pumps were then removed. The patient's cardiac index remained above 2.0 liters/min/m^2 following removal of the assist device. The intra-aortic balloon was removed on the sixth postoperative day. All inotropic medication was gradually discontinued over the next two days.

The subsequent postoperative course was uneventful. A perioperative myocardial infarction was diagnosed on the basis of new Q-waves on the ECG in the anterolateral and inferior leads. These electrocardiographic changes correlated with the elevation of CPK-MB enzymes to 64 and 57 IUs on the first and second postoperative days respectively. A multiple gated acquisition (MUGA) analysis on postoperative day 21 demonstrated an ejection fraction of 19% with evidence of an inferior and anterolateral myocardial infarction. The patient was discharged on the 39th postoperative day. He resumed his occupation as a construction foreman two months postoperatively. An exercise treadmill examination one year postoperatively demonstrated premature ventricular contractions but no evidence of myocardial ischemia or congestive heart failure. An ejection fraction was measured by MUGA scan at 25%. The patient remains free of cardiac symptoms.

Comment

The Bio-Medicus Model 520 (Figure) is a vortex pump constructed of valveless rotator cones made from non-thrombogenic acrylics, which impart a circular motion to the blood. The flow path of the pump is designed to eliminate turbulence and cavitation, thus reducing damage to blood elements. Our patient maintained essentially normal fibrinogen levels and platelet counts above 90,000. Magovern and coworkers demonstrated that this vortex pump can be used up to 144 hours without full anticoagulation.[8] The continuous heparinization necessary for cardiac assist devices employing an oxygenator can result in uncontrolled hemorrhage, intravascular coagulopathy, and devastating intracerebral bleeding. In our patient the activated clotting time was maintained at 150 seconds. Bleeding was controlled by using fresh frozen plasma, autotransfusion, and platelets. This centrifugal pump is relatively atraumatic to blood, and it appears that the state of controlled fibrinolysis prevents clinical thrombosis.

Although there has been considerable success with the Bio-Medicus pump, the problem of fibrin deposition on the cones is still of concern. We and

Table 2

Pharmacologic Agents Used During Biventricular Circulatory Support

Dopamine	5 mcg/kg/min
Isuprel	2 mcg/min
Epinephrine	5 mcg/min
Xylocaine	2 mg/min
Pronestyl	3 mg/min

Table 3

Coagulation Profile During Biventricular Circulatory Support

Hour	*Platelet Count*	*Fibrinogen Level*
0	186	235
3	236	240
6	164	258
9	116	257
12	100	235
15	98	230
18	155	235
21	114	200

Values expressed as a mean for each three-hour interval.

others have frequently demonstrated fibrin clots in the cones despite our anticoagulation protocol. Furthermore, we have seen frank thrombi with emboli, resulting in the death of one patient who was supported with a left Bio-Medicus centrifugal pump and no anticoagulants. Therefore, we do not advise the use of the Bio-Medicus pump without anticoagulant therapy.

This centrifugal device is capable of capturing the entire left or right atrial blood flow, and can pump up to 10 liters/min using continuous non-pulsatile flow. Our experience and that of Magovern and colleagues indicate that non-pulsatile flow can be successfully employed clinically for prolonged periods (up to six days) with preservation of renal, hepatic, pulmonary, and cerebral function.[8]

The marked simplicity of using a commercially available pump without full anticoagulation is a salient feature in this report. This method of ventricular bypass can be employed for resection of thoracic aneurysms or repair of traumatic aortic tears, as well as temporary biventricular assist for the failing heart.

Discussion

Postoperative cardiogenic shock occurs in 0.5% to 1.5% of patients undergoing open heart procedures. Left ventricular failure is usually present when the pulmonary artery diastolic or left atrial pressure exceeds 25 mm Hg, the systolic pressure is less than 90 mm Hg, and the cardiac index is less than 1.8 liters/min/m².[11] These patients cannot be weaned from cardiopulmonary bypass using conventional pharmacologic therapy and volume loading. Approximately one half of these patients will respond to intra-aortic balloon pump counterpulsation, but the remainder will require more sophisticated mechanical assistance.

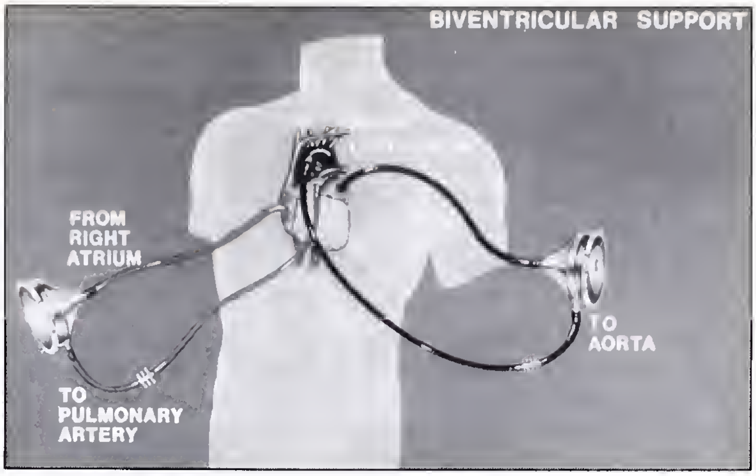

Fig 1. Schematic drawing of the Bio-Medicus vortex centrifugal pump used for temporary total heart bypass. Cannulation sites for right and left ventricular assistance are also shown.

The cause of ventricular failure is multi-factorial. Coronary air embolism, coronary spasm, poor myocardial protection, prolonged intraoperative ischemic time and perioperative myocardial infarction have been postulated as possible mechanisms for acute myocardial injury.[11] In patients with global myocardial ischemia, right ventricular dysfunction is a component of biventricular failure. The mortality of patients with biventricular collapse is near 100%. Recently several investigators have reported survival of 25%-50% using a biventricular bypass system.[12, 13]

In one group of patients, the intraoperative myocardial injury involved transient ischemia not of sufficient duration or severity to produce permanent myocardial necrosis. Pennington and colleagues have demonstrated that these patients with reversible myocardial injury benefit most from temporary biventricular assistance, as biochemical and functional integrity can then return to the injured but viable cardiac myocyte.[14] Braunwald and associates have described this situation as the "stunned" myocardium syndrome.[15] Brief periods of non-lethal myocardial ischemia can severely deplete adenosine triphosphate (ATP) levels and produce myocardial depression. Creatine phosphate stores are exhausted and metabolites of ATP, such as adenosine, hypoxanthine, and inosine, accumulate.[16] These nucleotides can be used as precursors in ATP resynthesis, but the myocardial cell is permeable to these substances and reperfusion washes them out. The washout of these metabolites may contribute to the relatively prolonged period of reduced ATP concentration.[17] Reibel and associates have demonstrated that myocardial function remains depressed until the pool of ATP used directly in the contractile process returns to normal.[18] Functional recovery is not instantaneous and a period of circulatory support from several hours to several days using biventricular assist devices is often required. During this reperfusion period, not only do high-energy phosphate levels increase, but myocardial edema is reduced, thus improving ventricular compliance.[19]

The second group of patients who may benefit from biventricular assist are those who suffer an intraoperative myocardial infarction. Reperfusion of an acute transmural infarct zone results in hemorrhage, edema, and a pattern of myocardial necrosis that includes contraction bands with mitochondrial edema. These features are confined to those areas of the myocardium already irreversibly damaged at the time of reperfusion. Jennings and co-workers have demonstrated that adjacent to the necrotic zone of infarction is a peripheral area of "stunned" myocardium, which contains reversibly injured cells that can be salvaged by a period of biventricular circulatory support.[20] During cardiac assist any reversible component of myocardial injury will have an optimal chance to recover while vital systemic organ perfusion is maintained.

Of these two circumstances, the chance of survival with the best recovery is in patients with "stunned" myocardium. In a series of patients with postcardiotomy failure supported with Pierce-Donachy assist devices, the occurrence of a perioperative myocardial infarction was associated with an increased likelihood of death.[21] However, the present case demonstrates that survival is possible if the infarct area is not massive.

Pennington and co-workers recently emphasized that effective clinical application of biventricular bypass depends on the following concepts: 1) precise hemodynamic monitoring, utilizing a Swan-Ganz thermodilution catheter. The placement of a left atrial line is particularly helpful in managing these patients; 2) rapid application of aggressive conventional techniques including dual chamber pacing, volume loading, intra-aortic balloon counterpulsation, and judicious use of pharmacologic agents when ventricular failure ensues; 3) the rapid institution of right and left assist devices in patients with biventricular failure; 4) verification that complete operative correction of any mechanical defects has been adequately performed; 5) atrial cannulation rather than ventriculoapical cannulation for venous return and 6) achievement of maximum hemostasis in order to prevent bleeding complications, particularly if the patient has undergone a prosthetic valve replacement and anticoagulation is deemed necessary.[22]

This case illustrates that transient non-lethal ischemia associated with an intraoperative myocardial infarction can lead to severe cardiac dysfunction. Although the electrocardiogram and the nuclear ejection fraction of 25% indicated permanent myocardial damage, the infarction was also associated with reversible acute ischemic injury as evidenced by the patient's gradual improvement in hemodynamic performance. This improvement would not have been accomplished if only conventional therapy had been applied.

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Results of Needle-Directed Biopsies of Mammographically Detected Lesions in a Community Hospital

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Screening mammography has made possible the detection of earlier and smaller breast lesions. With hookwire guidance, heretofore occult lesions can be located and excised. The authors report their experience with the technique and relate the importance of communication among the medical team as a factor in avoiding unnecessary surgery.

With the impetus of the American Cancer Society and the Field Liaison Program of the American College of Surgeons, coupled with aggressive marketing, there has been an enormous increase in the number of mammograms done in the past year. This increase has posed a special problem for the surgeon who is called upon to make a decision about who should undergo a biopsy procedure and under what criteria. Fortunately for the surgeons, the ingenuity of our radiologist colleagues came to the rescue with the development of needle localization of mammographic abnormalities.[1-3]

From July 1, 1986, through June 30, 1987, 120 women were scheduled for breast biopsy with needle localization at St. Joseph Hospital of Kirkwood, Mo. Fewer than half of these patients had had their mammograms done at St. Joseph Hospital. The majority had them done at various facilities elsewhere. There is considerable variation in technique and interpretation of mammograms, and certainly legal implications enter into the wording of the final report.

Of the 120 patients scheduled for needle localization, 110 needle localizations were performed on 107 patients. Two patients had bilateral needle localizations and one patient had needle localizations done on the same breast on two separate occasions, six months apart.

Of these 110 needle localizations, 17 occult cancers were found, including one tumor that measured 3.5 cm in diameter. This occurred in a woman who was 5 feet 5 inches tall and weighed 250 pounds. The following data describe our experience with breast biopsy after needle localization for non-palpable breast abnormalities.

Methods and Materials

Using the hooked wire, or Kopan's technique, the needle is inserted under local anesthesia by one of our radiologists. When the localization is found to be satisfactory, a dressing is applied and the patient is sent to the operating room. Biopsies are performed under general or local anesthesia, either on an inpatient or outpatient basis, depending on the preference of the surgeon and patient. The biopsy specimen, containing a core of tissue and the wire, is frequently, but not always, sent to the radiology department for specimen radiography. The specimen is then taken to the laboratory for frozen section. These cancers are frequently quite small, but if sufficient tumor tissue is available, estrogen and progesterone receptor assays are done. Recently, when there is sufficient tissue, we have sent a sample to another institution for flow cytometry studies for cell kinetics and DNA studies.

Table 1

Patients Undergoing Needle Localization
Age by Decade

Age	*Patients*	*Percent*	*Patients Found With Cancer*	*Percent*
30-39	8	7.4	0	0.0
40-49	34	32.0	4	11.7
50-59	27	25.5	3	11.0
60-69	22	20.5	4	18.0
70-79	12	11.2	2	16.0
80-89	4	3.6	3	75.0
Total	107		16	

Results

There is no documentation of the total number of women from which this group of 107 patients was obtained. Table 1 shows the age of the women by decade and the percentage from each decade who were found to have cancer. No cancers were found in the women in their 30s, and those in their 40s had an incidence of cancer that was slightly greater than those in their 50s. This is at variance with the figures reported by Symmonds,[4] which showed an incidence of only 2% in women younger than 50. The Breast Cancer Detection Demonstration Project shows that parallel results were found for women in their 40s with those in their 50s, and that screening is as effective in younger women as in older women.[5]

Table 2 outlines the suspicious mammographic findings. It has been customary to describe these as a mass or density, clustered calcifications, or a mass containing calcifications. Mammographic reports use words such as mass, density and nodule for the first group. In seven instances, the mass was described as stellate or spiculated. Five of the seven masses proved to be cancer. Clustered calcifications indicated cancer with twice the frequency as did the simple or "non-spiculated" mass.

Table 2

Mammographic Findings Leading to Needle Localization and Biopsy and Frequency of Positive Finding of Cancer

	Number of Localizations	*Cancers Found*	*Percentage*
Mass or Nodule or Density	53	5	9.4
Stellate or Spiculated Mass	7	5	71.3
Clustered Calcifications	44	8	18.2
Mass with Calcification	2	0	0.0
Multiple Densities	4	0	0.0

Table 3

Inpatient Versus Outpatient Biopsies
Local Anesthesia Versus General Anesthesia

All needle localizations were done under local anesthesia in the Department of Radiology by a radiologist, dressing applied and patient sent to operating suite for biopsy

Inpatient with General Anesthesia	45
Outpatient with Local Anesthesia	58
Outpatient (Same Day Surgery) with General Anesthesia	5
Inpatient with Local Anesthesia	2
Total	110 patients

In Table 3, inpatient versus outpatient status and local anesthesia versus general anesthesia are summarized. Several of the surgeons continue to admit all their breast biopsy patients as inpatients and schedule them for biopsy with needle localization followed by possible radical mastectomy under general anesthesia. Other surgeons routinely schedule all their breast biopsy patients as outpatients, using local anes-

Table 4

St. Joseph Hospital Mammograms Versus Mammograms Obtained at Other Facilities

	Total	*Successful Needle Localization*	*Cancers Found*	*Percentage*
St. Joseph Hospital Mammograms	54	53	10	18.5
Mammograms Done Elsewhere	62	54	6	9.7

With 8 patients, the suspicious finding (reason for needle localization) could not be reproduced for needle localization, and procedure was cancelled.

Table 5

Size of Primary Tumor in the 17 Cancers Found

1 cm or less	6
1 cm to 2 cm	6
Greater than 2 cm	2
Multiple less than 1 mm lesions multicentric	2
No clearly defined mass in cluster of calcifications Ca in Situ	1

Table 6

Type of Surgery Done for the 17 Cancers Found

Total Mastectomy with Axillary Dissection (one with immediate reconstruction)	13
Total Mastectomy	2
Subcutaneous Mastectomy with Mirror Biopsy at Opposite Breast	1
Reexcision of Biopsy Site with Axillary Dissection and Radiation Therapy	1

thesia for the procedure, and discuss treatment options after final diagnosis has been made. There were a few instances in which outpatients received general anesthesia (same-day surgery), and a few inpatient procedures were performed under local anesthesia.

The differences between in-house and out-of-house mammograms are considered in Table 4. In less than half (54 patients), needle localizations were ordered for women who had their mammograms done at our hospital. In only one of these 54 instances was it impossible to re-image the suspect lesion for needle localization. In 10 of the 54 cases (18.5%), cancer was found.

In 62 instances, needle localization was ordered for women who had had their mammograms elsewhere. In eight of these 62 patients (13%), the suspicious findings could not be reproduced for needle localization. Furthermore, only six patients in this group (9.7%) were found to have cancer.

In the entire group of 107 patients, 17 cancers were found in 16 patients. One woman was found to have bilateral simultaneous cancers. Table 5 summarizes the size of the primary tumor in each case. More than half were 1 cm or less in size, including two instances in which there were many tumors of less than 1 mm in size, and one in which carcinoma in situ was found in a nest of calcifications without a clear-cut mass or nodule. Fourteen were invasive cancers and three were non-invasive carcinoma in situ.

All mastectomy specimens were evaluated with full, four-quadrant examination. Multicentricity was determined in four instances of either invasive cancer or carcinoma in situ.

Axillary contents were examined in 15 patients. In 12 patients the axillary contents showed no evidence of metastasis. Three patients had positive findings. Of these three, one patient had a single positive node. One patient had 6 positive nodes out of 40. This patient had a 1 cm primary tumor. One patient had 15 positive nodes of 49. She had a 3.5 cm primary tumor.

Table 6 summarizes the treatment of these 16 patients with 17 cancers. The patient with bilateral simultaneous cancer was 88 years old. Her left breast contained a 2 cm spiculated mass, an infiltrating ductal carcinoma. Total mastectomy was done with axillary dissection, which contained 24 negative nodes. Her right breast contained a 7 mm spiculated mass, an infiltrating ductal cancer, and simple mastectomy was done, including removal of the lower portion of the axillary pedicle, which contained 17 negative nodes. By far the largest group of women opted for modified radical mastectomy, and only one patient chose a breast-preserving procedure. She underwent re-excision of the biopsy site with axillary dissection and radiation therapy. The preference for modified radical mastectomy may reflect the conservatism of this area of the country. Kinne describes a continuing increase in the frequency of breast-preserving procedures at the Memorial Sloan-Kettering Cancer Center in New York with 14% in 1984, 20% in 1985 and 26% of a total 824 breast procedures in 1986.[6, 7] Landercasper describes seven patients with carcinoma in situ who received no treatment other than close follow-up.[8] Symmonds reports 82% of their patients were treated with modified radical mastectomy and only 11% with biopsy and axillary dissection and with radiation therapy.[4]

Discussion

Mammographic screening has proved effective in finding cancers in an early stage in their evolution, as this study indicates. The Breast Cancer Detection Demonstration Project reported on an 11-year follow-up on 4,240 women with histologically confirmed diagnoses with relative five-, eight-, and 10-year survival rates of 88%, 83%, and 79%.

The development of needle localization has made it possible for the surgeon to excise otherwise occult lesions.

There were 11 surgeons involved in treating these 107 patients. Two surgeons had one patient each and one surgeon had two patients in this group. None of these four patients were found to have cancer. It is of interest that of the other eight surgeons, one surgeon found only two cancers in 27 mammographically indicated biopsies, for a percentage of 7.5%. All of the mammograms had been performed at other facilities. The remaining seven surgeons found cancers in 16% to 35.7% of their patients. These percentages compare favorably with the national averages.[4, 8]

As noted earlier, we found a larger proportion of positive biopsy findings among the patients who had received mammograms and subsequent treatment at our hospital. We believe our in-house results were improved by close communication between surgeon and patient, and among the surgeon, the radiologist who does the original mammogram, and the radiologist who performs the needle localization procedure. This close working relationship can mean fewer needless biopsies and much less anxiety and cost to the patient.

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New Members

■ **Daphne W. Anderson, M.D.,** M173 Health Sciences Center, UMCHSC, One Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Anderson received her preliminary education at Centenary College of Louisiana and obtained her medical degree at Tulane University in 1983. She completed her residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Anderson specializes in dermatology.

■ **Mark D. Anderson, M.D.,** One Hospital Drive, UMCHSC, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Anderson received his preliminary education at Drury College and obtained his medical degree at Tulane University in 1983. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Anderson specializes in internal medicine.

■ **H. Brian Balfour, M.D.,** 901 Robidoux, St. Joseph 37027, has become a member of the Buchanan County Medical Society. Dr. Balfour received his preliminary education at the Georgia Institute of Technology and obtained his medical degree at the Medical College of Georgia in 1971. He completed his residency at the University of Miami Hospital and Clinics, Miami, FL. Dr. Balfour specializes in radiation therapy.

■ **A. Michael Borkon, M.D.,** Medical Plaza, Suite 50-II, 4320 Wornall Road, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Borkon received his preliminary education at Case Western Reserve University and obtained his medical degree at Johns Hopkins University in 1975. He completed his residency at Johns Hopkins University, Baltimore, MD. Dr. Borkon specializes in cardiothoracic surgery.

■ **Robert N. Buffaloe, M.D.,** 1505 Southwest Blvd., Jefferson City, 65101, has become a member of the Cole County Medical Society. Dr. Buffaloe received his preliminary education at the University of Central Arkansas and obtained his medical degree at the University of Arkansas in 1980. He completed his residency at the Area Health Education Center Northwest, Fayetteville, AR. Dr. Buffaloe specializes in family practice.

■ **Larry K. Chase, M.D.,** 1965 S. Fremont, Suite 3200, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Chase received his preliminary education at Cameron University and obtained his medical degree at the University of Oklahoma in 1982. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Chase specializes in internal medicine.

■ **David P. Diemer, M.D.,** 1325 S. Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Diemer received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1985. He is completing his residency at St. Louis University Hospitals, St. Louis, MO. Dr. Diemer specializes in radiology.

■ **Kathryn M. Diemer, M.D.,** 1450 Bluebird Terrace, St. Louis 63144, has become a member of the St. Louis Metropolitan Medical Society. Dr. Diemer received her preliminary education at the University of Missouri-Kansas City and obtained her medical degree at UMKC in 1985. She is completing her residency at Jewish Hospital, St. Louis, MO. Dr. Diemer specializes in internal medicine.

■ **Ralph J. Duda, Jr., M.D.,** 3231 S. National, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Duda received his preliminary education at Illinois Benedictine College and obtained his medical degree at Northwestern University in 1981. He completed his residency at the Mayo Clinic, Rochester, MN. Dr. Duda specializes in endocrinology.

■ **Michael R. Driks, M.D.,** 6601 Rockhill Road, Baptist Medical Center, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Driks received his preliminary education at Brandeis University and obtained his medical degree at the University of Miami in 1981. He completed his residency at Harbor/UCLA Medical Center, Torrance, CA. Dr. Driks specializes in internal medicine/infectious diseases.

■ **Robert H. Finkle, M.D.,** 103 11th Street, Suite 2, Chillicothe 64601, has become a member of the Grand River County Medical Society. Dr. Finkle received his preliminary education at Kansas University and obtained his medical degree at the University of Kansas in 1954. He completed his residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Finkle specializes in orthopaedic surgery.

■ **Terry A. Fuller, M.D.,** 110 S. Central, Suite 400, Clayton 63105, has become a member of the St. Louis Metropolitan Medical Society. Dr. Fuller received his preliminary education at the University of Notre Dame Dulac and obtained his medical degree at the Washington University Medical School in 1974. He completed his residency at Washington University, St. Louis, MO. Dr. Fuller specializes in psychiatry.

■ **Glenn L. Gordon, M.D.,** 1035 Bellevue, St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Gordon received his preliminary education at the University of Illinois and obtained his medical degree at the University of Antwerp, Belgium in 1982. He completed his residency at Mount Sinai Hospital Medical Center, Chicago, IL. Dr. Gordon specializes in internal medicine.

■ **Stephen E. Halpin, M.D.,** 711 Grand Avenue, Hannibal 63401, has become a member of the Northeast Missouri County Medical Society. Dr. Halpin received his preliminary education at Quincy College and obtained his medical degree at Southern Illinois University in 1982. He completed his residency at the SIU School of Medicine, Springfield, IL. Dr. Halpin specializes in internal medicine.

■ **Frederick G. Hicks, M.D.,** 3009 N. Ballas, St. Louis 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Hicks received his preliminary education at Carleton College and obtained his medical degree at the University of Minnesota School of Medicine in 1981. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Hicks specializes in psychiatry.

■ **Ben L. Jolly, M.D.,** 720 Medical Park Drive, Mexico 65265, has become a member of the Audrain County Medical Society. Dr. Jolly obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1979. He completed his residency at St. Francis Regional Medical Center, Wichita, KS. Dr. Jolly specializes in orthopaedic surgery.

■ **Maureen A. Kelty, M.D.,** 1502 N. 36th, St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Kelty received her preliminary education at South Dakota State University and obtained her medical degree at the University of South Dakota School of Medicine in 1983. She is completing her residency at Sacred Heart Hospital, St. Joseph, MO. Dr. Kelty specializes in obstetrics/gynecology.

■ **Linza T. Killion, M.D.,** 4320 Wornall Road, Suite 240, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Killion received her preliminary education at Westminster College and obtained her medical degree at the University of Missouri-Columbia School of Medicine in 1978. She completed her residency at Vanderbilt University, Nashville, TN. Dr. Killion specializes in urology.

■ **Festus J. Krebs, III, M.D.,** 6420 Prospect, Suite T401, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Krebs received his preliminary education at St. Louis University and obtained his medical degree at St. Louis University School of Medicine in 1980. He completed his residency at St. Louis University Medical Center, St. Louis, MO. Dr. Krebs specializes in otolaryngology.

■ **Michael B. Loggan, M.D.,** 114 B Westwoods, Liberty 64068, has become a member of the Clay-Platte County Medical Society. Dr. Loggan received his preliminary education at Kansas University and obtained his medical degree at Kansas University in 1982. He completed his residency at the Kansas University Medical Center, Lawrence, KS. Dr. Loggan specializes in pulmonary/internal medicine.

■ **Jeffrey A. Luerding, M.D.,** Gashland Clinic, 8630 N. Oak, Kansas City 64155, has become a member of the Clay-Platte County Medical Society. Dr. Luerding received his preliminary education at William Jewell College and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1984. He completed his residency at the Mayo Clinic, Rochester, MN. Dr. Luerding specializes in family medicine.

■ **Lawrence R. McBride, M.D.,** 1325 S. Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. McBride received his preliminary education at John Carroll University and obtained his medical degree at the St. Louis University School of Medicine in 1975. He completed his residency at St. Louis University Medical Center, St. Louis, MO. Dr. McBride specializes in surgery.

■ **Patrick W. McLear, M.D.,** Box 8115, 517 S. Euclid Ave., St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. McLear received his preliminary education at Washington University and obtained his medical degree at the University of Michigan in 1986. He is completing his residency at Barnes Hospital, St. Louis, MO. Dr. McLear specializes in otolaryngology.

■ **Pamela S. McVey, M.D.,** 3212 Central, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. McVey received her preliminary education at the University of Arkansas and obtained her medical degree at the University of Kansas in 1980. She completed her residency at the University of Kansas, Kansas City, KS. Dr. McVey specializes in emergency medicine.

■ **Michael E. Mulligan, M.D.,** 615 S. New Ballas Road, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Mulligan received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1986. He is completing his residency at St. John's Mercy, St. Louis, MO. Dr. Mulligan specializes in family practice.

■ **Bharat R. Nakra, M.D.,** 1221 S. Grand, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Nakra received his preliminary education at Government College of Punjab and obtained his medical degree at Punjab University in 1966. He completed his residency at Postgraduate Institute of Medical Education, India. Dr. Nakra specializes in psychiatry.

■ **Keith S. Naunheim, M.D.,** 1325 S. Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Naunheim received his preliminary education at Johns Hopkins University and obtained his medical degree at the University of Chicago in 1978. He completed his residency at the University of Chicago, Chicago, IL. Dr. Naunheim specializes in surgery.

■ **Robert E. Neihart, M.D.,** Medical Plaza Building, Suite 208, 4320 Wornall Road, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Neihart received his preliminary education at Baker University and obtained his medical degree at Washington University in 1982. He completed his residency at St. Luke's Hospital, Kansas City, MO. Dr. Neihart specializes in internal medicine.

■ **Raul O. Parra, M.D.,** 1325 S. Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Parra received his preliminary education at the University of Seville, Spain and obtained his medical degree at the University of Seville, Spain in 1980. He completed his residency at St. Louis University, St. Louis, MO. Dr. Parra specializes in urology.

■ **Robert E. Remis, M.D.,** 1322 N. 36th, St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Remis received his preliminary education at the University of Oklahoma and obtained his medical degree at the University of Oklahoma College of Medicine in 1982. He completed his residency at the Veteran's Administration Medical Center, Oklahoma City, OK. Dr. Remis speicalizes in urology.

■ **Michael J. Roselman, M.D.,** 1965 S. Fremont, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Roselman received his preliminary education at Washington University and obtained his medical degree at St. Louis University in 1979. He completed his residency at Jewish Hospital, St. Louis, MO. Dr. Roselman specializes in cardiovascular diseases.

■ **Atulkumar T. Roy, M.D.,** 7500 Morganford Road, St. Louis 63116, has become a member of the St. Louis Metropolitan Medical Society. Dr. Roy received his preliminary education at the University of Newcastle, London, England and obtained his medical degree at the American University of the Caribbean in 1982. He completed his residency at Deaconness Hospital, St. Louis, MO. Dr. Roy specializes in internal medicine.

■ **Courtney Shands, III, M.D.,** 456 N. New Ballas Road, St. Louis 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Shands received his preliminary education at Stanford University and obtained his medical degree at Vanderbilt University in 1982. He is completing his residency at Vanderbilt University, Nashville, TN. Dr. Shands specializes in surgery.

■ **David J. Schanzlin, M.D.,** 3655 Vista Ave., St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Schanzlin received his preliminary education at Case Western Reserve University and obtained his medical degree at Pritzker School of Medicine in 1975. He completed his residency at the University of Chicago, Chicago, IL. Dr. Schanzlin specializes in ophthalmology.

■ **Susan J. Shapiro, M.D.,** 4939 Audubon, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Shapiro received her preliminary education at the University of Chicago and obtained her medical degree at the University of Illinois in 1983. She completed her residency at the Mallinckrodt Institute of Radiology, St. Louis, MO. Dr. Shapiro specializes in radiation oncology.

■ **David M. Smid, M.D.,** 1000 East Primrose, #130, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Smid received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1983. He completed his residency at the University of Michigan, Ann Arbor, MI. Dr. Smid specializes in anatomic and clinical pathology.

■ **George P. Sotiropoulos, M.D.,** Children's Mercy Hospital, 24th at Gillham Road, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Sotiropoulos received his preliminary education at Tulane University and obtained his medical degree at St. Louis University in 1982. He completed his residency at Children's Mercy Hospital, Kansas City, MO. Dr. Sotiropoulos specializes in pediatrics.

■ **Kim C. Wade, M.D.,** 2727 Main, Suite 100, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Wade received her preliminary education at the University of Missouri-Kansas City and obtained her medical degree at UMKC in 1986. She completed her residency at UMKC Affiliated Hospitals, Kansas City, MO. Dr. Wade specializes in internal medicine.

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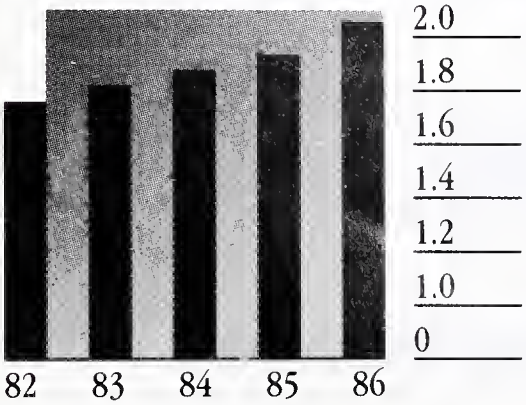

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Medical School News

University of Missouri-Kansas City

- The Medical School's second annual Research Day March 25-26 was highlighted with a keynote presentation by **Paul Steele, M.D.** Dr. Steele, who spoke on "Medical Progress Through Molecular Genetics," is a 1978 Medical School graduate who currently is a research fellow within the Division of Infectious Diseases at Washington University in St. Louis. A 1987-88 recipient of a National Research Service Award from the National Institutes of Health, Dr. Steele also has done residencies in anatomic pathology at Massachusetts General Hospital, Boston, and in laboratory medicine at Barnes Hospital, St. Louis. In addition, he spent three years as a medical staff fellow with the Laboratory of Molecular Microbiology, National Institute of Allergy and Infectious Diseases, NIH. Other Research Day highlights included a display of faculty members' poster sessions and students' competitive oral presentations.

- The second annual meeting of the *Edward J. Twin, M.D., Memorial Society* is scheduled for May 18, with keynote speaker **Edmund D. Pellegrino, M.D.** A noted bioethicist, Dr. Pellegrino is director of the Kennedy Institute of Ethics and John Carroll Professor of Medicine and Medical Humanities at Georgetown University. A recipient of 33 honorary doctoral degrees, he is the author of more than 400 published works. The Twin Society was established to perpetuate the memory of a man who gave his life to others on many levels, including as friend, educator, and physician. A reception will be held in the Medical School lobby at 6 p.m. May 18; the keynote address will be at 7 p.m. For more information, call 816/276-1131.

- **James P. Youngblood, M.D.,** professor and chairman of the Department of Obstetrics and Gynecology, recently was elected to membership in the Fothergill Club of London, England. The Fothergill Club is a prestigious medical organization composed of 25 physicians from the United Kingdom and four select physicians from the United States.

- Several noted honors recently have gone to **Dev Maulik, M.D.,** professor of Obstetrics and Gynecology. In January, he was appointed vice chairman of the Department of Obstetrics/Gynecology at Truman Medical Center. In this capacity, he continues to hold the position of director of Obstetrics and Perinatology. Dr. Maulik is co-editor of the first published textbook on Doppler, *Doppler Ultrasound Measurement of Maternal-Fetal Hemodynamics*, published in December 1987. He also is one of the founding members of the International Perinatal Doppler Society, which will hold its first congress in Kansas City in May 1988 at the Westin Crown Center Hotel. Attending will be world-recognized leaders in the field of Doppler ultrasound technology.

- A familiar face recently returned to the School of Medicine and Truman Medical Center, its primary affiliated hospital, when **Donald Smithburg** succeeded **Russell Jones** with responsibilities at both institutions. Mr. Smithburg, who previously was director of Administrative Affairs at the Medical School, is returning as associate executive director of Truman Medical Center Inc., executive director of the Truman Medical Center Charitable Foundation, and special assistant to **James J. Mongan, M.D.,** Medical School dean and TMC executive director.

- Senior student **Randy Brown** recently was appointed a member of the board of advisors for *Medical Student* magazine. In addition to reviewing technical articles, in his capacity on the board of advisors, he will have input on the future content of these issues. Randy also is author of an article titled, "Rhinomanometry: The Past, Present, and Future," which was scheduled to appear in *Medical Student's* March/April issue.

- **Joseph A. Salomone III, M.D.,** and **Mark Steele, M.D.,** both assistant professors of Emergency Medicine, are coauthors of, "An Unusual Presentation of Bilateral Facet Dislocation of the Cervical Spine," published in the December 1987 issue of *Annals of Emergency Medicine*.

- **Howard Rodenberg, M.D.,** instructor and resident in Emergency Medicine, is author of, "Medical Emergencies Aboard Commercial Aircraft," also published in the December 1987 issue of *Annals of Emergency Medicine*.

Washington University

- Washington University School of Medicine in St. Louis will reduce tuition by 5% for the 1988-89 academic year.

The tuition decrease was announced by **M. Kenton King, M.D.,** dean of the School of Medicine. The decision affects students in all four medical school classes, and will lower next year's tuition to $13,400 from the current level, $14,100.

Washington University is believed to be the only medical school in the country to lower its tuition. The decision was approved by the University's Board of Trustees upon the recommendation of the Executive Faculty, a medical school governing board composed of department heads and other key administrators.

- **Samuel B. Guze, M.D.,** vice chancellor for medical affairs at Washington University School of Medicine in St. Louis and president of the Washington University Medical Center, has received two prestigious awards.

In recognition for excellence in research, teaching and leadership, he has received the American Academy of Clinical Psychiatrists Achievement Award. The academy was established in 1975 to provide a forum for practicing clinical psychiatrists committed to the idea of treating mental disorders as a medical illness. Guze, one of the organization's founders, is the fourth to receive the annual award.

Guze also has received the Distinguished Public Service Award from the U.S. Department of Health and Human Services. The award recognizes him for outstanding scientific contributions to the understanding of genetic and environmental factors in the development of alcoholism.

Guze is the Spencer T. Olin Professor of Psychiatry and head of the Department of Psychiatry at the School of Medicine. He is psychiatrist-in-chief at Barnes and Children's hospitals and a consulting psychiatrist to Jewish Hospital, all sponsoring institutions of the Washington University Medical Center. He is also a consulting psychiatrist to Malcolm Bliss Mental Health Center in St. Louis.

- **Joseph F. Boyle, M.D.,** executive vice president of the American Society of Internal Medicine (ASIM), delivered the fourth annual *Rudolph A. Tuteur Visiting Professor of Medicine Lecture* February 18 at Washington University School of Medicine in St. Louis.

Boyle's talk, "What's the Bottom Line," covered the current and future status of health care financing.

The lectureship, established to promote understanding of problems in caring for the chronically ill, is in memory of **Rudolph A. Tuteur.** Tuteur suffered from chronic obstructive pulmonary disease. His son, **Peter G. Tuteur, M.D.,** is associate professor of medicine and a staff physician at Barnes Hospital, a sponsoring institution of the Washington University Medical Center.

Boyle is an associate clinical professor of medicine at the University of Southern California School of Medicine. Before becoming executive vice president of ASIM, he practiced internal medicine in Los Angeles for more than 30 years, specializing in diseases of the chest. He is a former president of the American Medical Association, California Medical Association, Los Angeles County Medical Association, and the California Chapter of the American College of Chest Physicians.

- A respiratory and critical care specialist at Washington University School of Medicine in St. Louis has been awarded a $900,000 five-year grant to study the role of cell growth factors in fibroproliferative lung diseases.

The grant, from the National Institutes of Health, was awarded to **John A. McDonald, M.D., Ph.D.,** director of the respiratory and critical care division at Barnes Hospital in the Department of Medicine.

McDonald's research focuses on the role growth factors play in fibronectin in lung scarring following injury. He and co-investigator **Edmund C. Crouch, M.D., Ph.D.,** associate professor of pathology and director of anatomic pathology at Jewish Hospital, are trying to determine the mechanisms by which growth factors increase excessive scar tissue production of connective tissue proteins by lung cells.

St. Louis University

- **Vallee L. Willman, M.D.,** professor and chairman of the department of surgery at St. Louis University School of Medicine, has been named to the new *C. Rollins Hanlon, M.D., Chair in Surgery.*

The $1.2 million endowed professorship in surgery honoring Dr. Hanlon was announced last June. Dr. Hanlon is best known in St. Louis as a pioneer in heart surgery. In 1956, he led a 12-person team in the first open-heart surgery in the lower midwest region. He conducted the research that resulted in the area's first human heart transplant in 1972.

Dr. Hanlon was Dr. Willman's predecessor as chief of the department of surgery. Together, they developed the groundwork for the most comprehensive cardiac surgery program in St. Louis.

Dr. Willman, as a pioneer in cardiothoracic surgery, has made landmark contributions to the field. He constructed and operated the heart-lung machine used during the first open-heart surgery in St. Louis in 1956. The operation was performed by Dr. Hanlon. In 1972, Dr. Willman and his surgical team performed the midwest's first heart transplant.

Dr. Willman graduated from St. Louis University School of Medicine in 1951, began his post-doctoral training at the Philadelphia General Hospital that year, and completed his residency in 1956 at what is now The University Hospital at St. Louis University Medical Center.

A fellow of the American College of Surgeons since 1961, Dr. Willman was recently honored with that organization's highest honor, the Distinguished Service Award.

Dr. Willman was named a senior instructor in surgery at the university in 1957, became a professor in 1963, vice chairman in 1967 and chairman in 1969. He was an Ellen McBride fellow in surgery in 1956-1957 and recipient of the St. Louis Medical Society Gold Medal and Certificate of Merit Award in 1973.

The University of Missouri-Columbia

- **Bernard Beitman, M.D.,** associate professor of psychiatry and **Javad Kashani, M.D.,** professor of psychiatry, were recently elected Fellows of the American Psychiatric Association.

- **Gordon D. Brown, Ph.D.,** professor and director of health services management, and **Keith E. Boles, Ph.D.,** assistant professor of health services management, conducted an administrators' certification workshop in October for the American College of Health Care Administrators. Dr. Brown also reviewed the health administration program last fall at the Universidad del Norte in Barranquilla, Colombia, for the U.S. Agency for International Development. In addition, Dr. Boles presented "Current Research and Policy Issues in Health Services Finance" to five Robert Wood Johnson fellows at the Johns Hopkins Center for Research in Health Care Finance in Baltimore last fall.

- **David Bylund, Ph.D.,** professor of pharmacology, has received a three-year National Institutes of Health award of $292,134 to study hormonal-signal transduction of neural transmitters in cells.

- **E. Dale Everett, M.D.,** professor and director of the division of infectious diseases, is co-author with **Stephen Dolan, M.D.,** a former postdoctoral fellow, of an article detailing successful treatment of a 17-year-old boy with almonella bone infection using a new drug, cefotaxime. The article was published in the September 1987 issue of the Archives of Internal Medicine. Dr. Everett says the new drug will be useful since salmonella bacteria are becoming more resistant to common antibiotics.

- **Lynette Feeney-Burns, Ph.D.,** professor of ophthalmology, has received a five-year grant of $687,541 from the National Eye Institute to continue her studies of age-related macular degeneration of the retina. Dr. Feeney-Burns has also been awarded a Senior Scientific Investigator Award of $40,000 from Research to Prevent Blindness, the world's leading voluntary organization in support of vision research.

The organization provides annual grants to more than 55 U.S. medical schools. Dr. Feeney-Burns' award is in recognition of her solid record of achievement and contribution to eye research.

- **Tom Feldbush, Ph.D.,** has joined the School's Department of Microbiology as professor with a joint appointment as assistant chief of staff for research and development at Truman Veterans Hospital. Dr. Feldbush is also serving as assistant dean for research at the School of Medicine. Previously, he was professor of microbiology at the University of Iowa in Iowa City and served as deputy director of the University of Iowa Cancer Center since 1983.

- **Richard A. Finkelstein, Ph.D.,** Millsap Distinguished Professor and chairman of microbiology, has received a five-year training grant of $449,687 from the National Institute of Allergy and Infectious Diseases to teach four predoctorate and two postdoctorate fellows the "Molecular Aspects of Microbial Pathogenesis."

- **Gary P. Kraus, M.B.A., J.D.,** associate professor of health services management presented three sessions on risk management and liability law last winter to anesthesiologists and nurse anesthetists attending the conference "Anesthesia, a Decade of Progress" in Freeport, Bahamas.

- **Joyce A. Mitchell, Ph.D.,** director of the Information Science Group, demonstrated a computer assisted interactive videodisk system on rheumatic diseases last fall at the 11th annual Symposium on Computer Application in Medical Care in Washington, D.C. The School's Information Science Group developed the system.

- **Arthur J. Robins, Ph.D.,** professor of psychiatry and chief of the Mental Health Sciences Section, gave a talk on his experience as a Fulbright scholar to India in 1981 and 1982 at the 10th annual meeting of the Fulbright Alumni Association recently at Georgetown University in Washington, D.C. He discussed competing cultural groups in India and psychological aspects of their conflicts and resolutions.

- **Kevin Rudeen, Ph.D.,** associate professor of anatomy, has received a five-year Research Scientist Development Award of $250,000 from the National Institute on Alcohol Abuse and Alcoholism to study the effects of fetal alcohol on neural endocrine regulation of reproduction.

- **Willis K. Samson, Ph.D.,** has joined the faculty in the Department of Anatomy as associate professor. Dr. Samson received his Ph.D. in physiology from the University of Texas Health Science Center at Dallas and has served as an assistant professor of physiology there since 1981. Dr. Samson's research interests include neuropeptides and neuroendocrinology, hypothalamic control of anterior pituitary function and neuroendocrine actions of atrial peptides.

- **Hugh E. Stephenson Jr., M.D.,** interim dean and John Growdon Distinguished Professor of surgery, has been named to a four-year term on the Council of the Southern Medical Association. The council is the decision-making arm of the organization.

- **Michael Sturek, Ph.D.,** has been appointed assistant professor and research investigator of physiology. Previously a postdoctoral fellow and research associate at the University of Chicago, Dr. Sturek is establishing a cell-culture laboratory at the University's Dalton Research Center.

- **Joseph T. Walls, M.D.,** associate professor of cardiothoracic surgery, presented "Adverse Effect of Permanent Cardiac Internal Defibrillator Patches on External Defibrillation" last fall at the international conference on Management of Cardiac Arrhythmias in London.

- In February, the School of Medicine hosted a day of events honoring **Larry G. Piepergerdes, M.D.,** an alumnus of the University of Missouri-Columbia School of Medicine and current MSMA president. The Larry G. Piepergerdes Day recognized the Kansas City ophthalmologist and 1964 graduate of the School of Medicine for his achievements.

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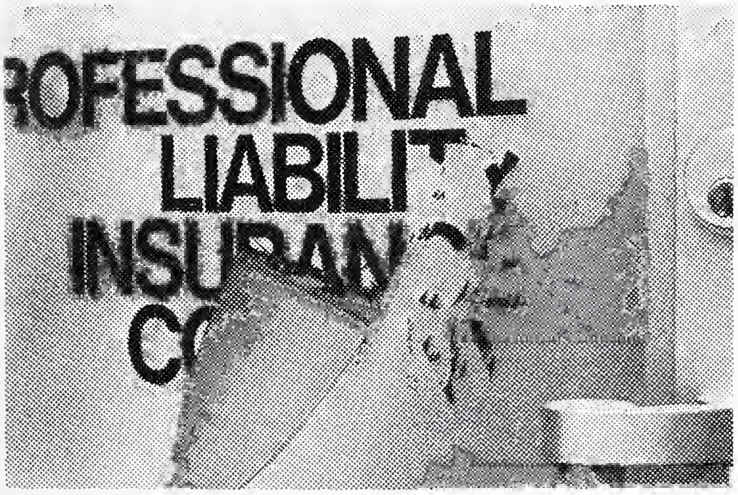

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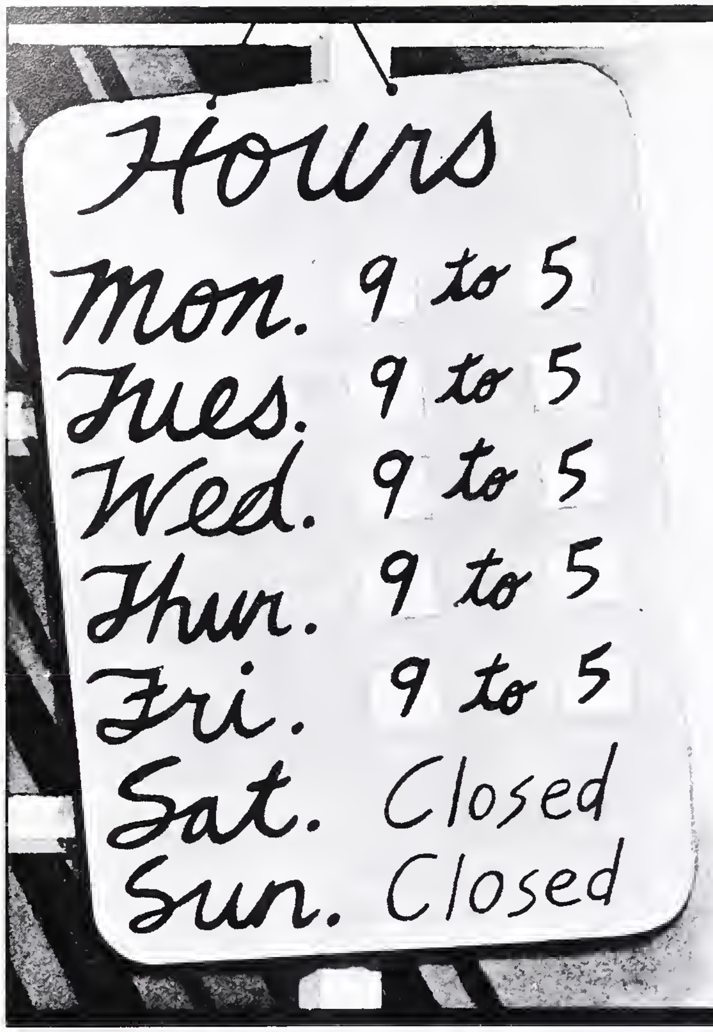

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Physician’s Recognition Awards

Thirty MSMA members qualified for the MSMA-AMA Physician’s Recognition Award during January 1988.

The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

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Grand River

Natu B. Patel, *Bethany*

Greene

Roger K. Cady, *Springfield*
Sally L. Hubbard, *Springfield*
Charles L. Jobe, *Springfield*
Benjamin A. Lampert, *Springfield*

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Robert D. Conn, *Kansas City*
Michele R. Flicker, *Kansas City*
Robert L. Givler, *Kansas City*
Gordon D. Stillie, *Kansas City*
Darryl L. Wallace, *Kansas City*
James W. Willoughby, *Liberty*
Morris F. Wise, *Kansas City*

Perry-Ste. Genevieve

Cresenciano A. Medrano, *Perryville*

St. Joseph Metro

Hillard K. Cohen, *St. Ann*
Edward G. Dewein, *St. Louis*
Joseph M. Forand, *St. Louis*
Yasuo Ishida, *St. Louis*
Akira Iwane, *St. Louis*
Edward J. Kunst, *Manchester*
Leander Lee, *St. Louis*
Benjamin Milder, *St. Louis*
Marvin R. Mishkin, *St. Louis*
John E. Mullins, *Chesterfield*
Carl H. Nielsen, *Webster Groves*
Theodore L. Paletta, *St. Louis*
Walter R. Stafford, *Clayton*
Harry A. Wittler, *Kirkwood*

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Effective antihypertensive* therapy...without the bananas

DAW
'DYAZIDE' AS WRITTEN.

*Not for initial therapy. See brief summary.

Before prescribing, see complete prescribing information in SK&F CO. literature or PDR. The following is a brief summary.

* **WARNING**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.
Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.
Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin[ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.
Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ:L45

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Cidra, P.R. 00639

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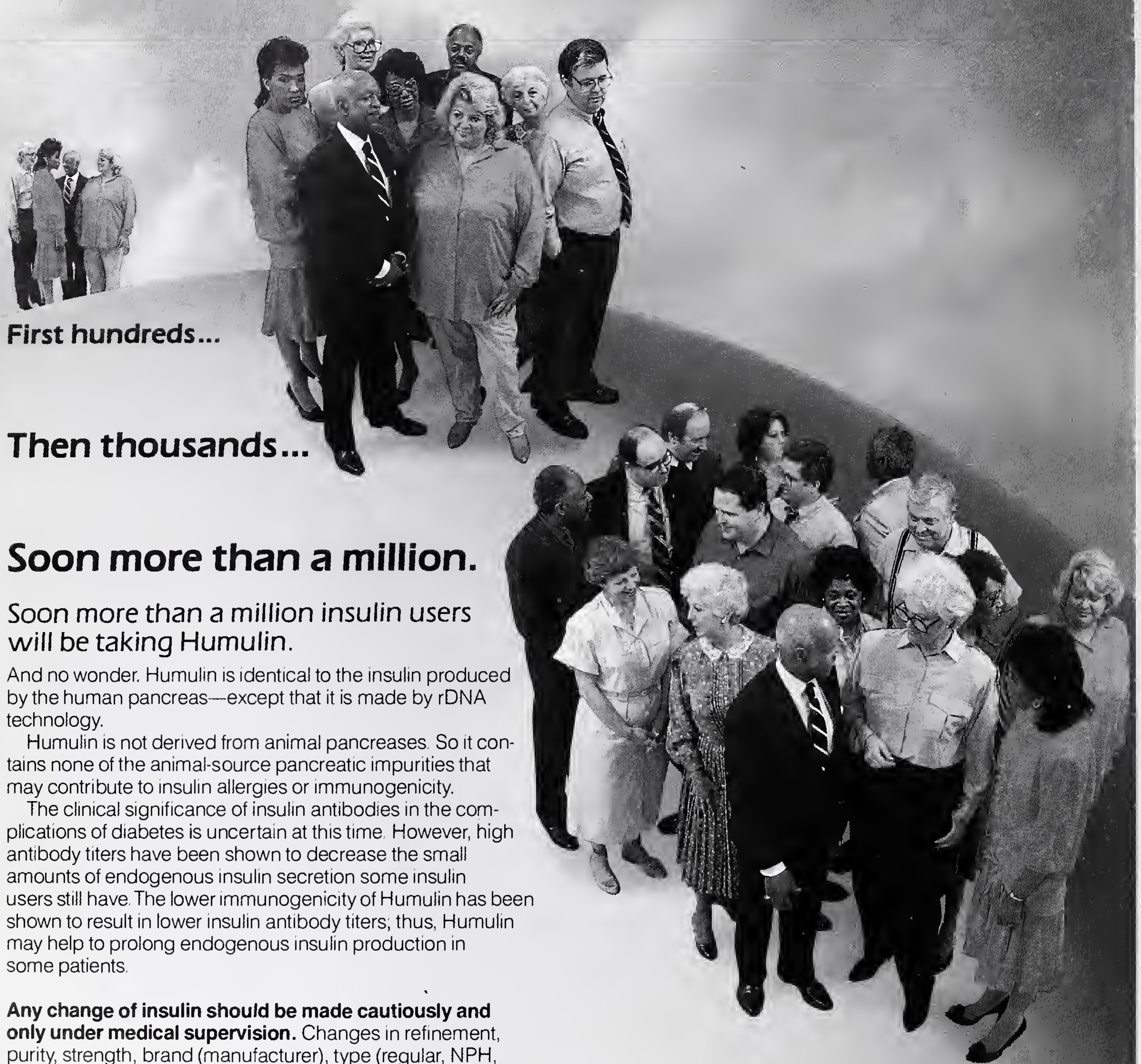

First hundreds...

Then thousands...

Soon more than a million.

Soon more than a million insulin users will be taking Humulin.

And no wonder. Humulin is identical to the insulin produced by the human pancreas—except that it is made by rDNA technology.

Humulin is not derived from animal pancreases. So it contains none of the animal-source pancreatic impurities that may contribute to insulin allergies or immunogenicity.

The clinical significance of insulin antibodies in the complications of diabetes is uncertain at this time. However, high antibody titers have been shown to decrease the small amounts of endogenous insulin secretion some insulin users still have. The lower immunogenicity of Humulin has been shown to result in lower insulin antibody titers; thus, Humulin may help to prolong endogenous insulin production in some patients.

Any change of insulin should be made cautiously and only under medical supervision. Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente®, etc), species/source (beef, pork, beef-pork, or human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.

DIET...EXERCISE...

Humulin®
human insulin
(recombinant DNA origin)

For your insulin-using patients

Humulin L
Humulin N
Humulin R
Humulin BR
Humulin U

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IN DIABETES CARE

Lilly
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Eli Lilly and Company
Indianapolis, Indiana
46285

In Memoriam

- **Earl L. Brand, M.D.,** died February 2, 1988 at the age of 79. Dr. Brand, a general practitioner, practiced medicine in Webster Groves for 58 years before retiring in 1985. He had been on the staffs of Deaconess Hospital, St. Mary's Health Center and St. Joseph Hospital in the St. Louis area. He obtained his medical degree at Northwestern University in 1927. Dr. Brand was a member of the St. Louis Metropolitan Medical Society.

- **Carl N. Lindquist, M.D.,** died February 2, 1988 at the age of 85. Dr. Lindquist, who specialized in occupational medicine, practiced medicine in Kansas City for more than 41 years from 1927-1969. He was a former chief of staff at Trinity Lutheran Hospital and was affiliated with the hospital for 40 years. He graduated from the University of Kansas and obtained his medical degree at the Kansas University Medical School in 1927. Dr. Lindquist was a member of the Metropolitan Medical Society of Greater Kansas City.

- **M. Donald McFarland, M.D.,** died February 10, 1988 at the age of 78. Dr. McFarland, an internist, practiced medicine in Kansas City for more than 40 years before retiring in 1984. He served on the St. Luke's Hospital staff until that time, and prior to that served as a consultant to the Veteran's Administration hospitals in Kansas City and Leavenworth. He was also an assistant professor of medicine at the University of Kansas Medical Center. He obtained his medical degree at the University of Kansas Medical School in 1936. Dr. McFarland was a member of the Metropolitan Medical Society of Greater Kansas City.

- **Thomas M. Mier, M.D.,** died January 21, 1988 at the age of 73. Dr. Mier, an obstetrician/gynecologist, practiced medicine in St. Louis for many years, serving for five years as the head of the obstetric/gynecology department at St. Louis University. For the last three years of his life, he had worked as a part-time consultant with the Student Health Service at the University of Missouri-Columbia. He was a member of the Editorial Board of *Missouri Medicine* at the time of his death. He obtained his medical degree at Loyola University School of Medicine in 1934. Dr. Mier was a member of the St. Louis Metropolitan Medical Society.

- **Robert G. Powell, M.D.,** died February 26, 1988 at the age of 69. Dr. Powell, an internist, practiced medicine in Galena, Kansas from 1947 to 1961, then moved his office to Joplin, where he practiced until his retirement in 1978. He was chief of staff at St. John's Regional Medical Center from 1968 to 1970. He was also the designated physician for the Galena Volunteer Fire Department for 27 years. He obtained his medical degree at the University of Kansas School of Medicine in 1944. Dr. Powell was a member of the Jasper County Medical Society.

- **William A. Stephens, M.D.,** died December 20, 1987 at the age of 84. Dr. Stephens, an orthopaedic surgeon, practiced medicine in Chesterfield. He obtained his medical degree at the Washington University School of Medicine in 1935. Dr. Stephens was a member of the St. Louis Metropolitan Medical Society.

Children's Hospital

At Washington University Medical Center

ST. LOUIS, MISSOURI
PROGRESS IN CLINICAL PEDIATRICS IV
MAY 20-21, 1988

FRIDAY A.M. ★ ADVANCES IN HEMATOLOGY AND ONCOLOGY

Enjoy face-to-face presentations by Washington University Medical School faculty & Children's Hospital physicians. Participate in discussions of important topics in hematology and oncology. Emphasis is on the relevance of these subjects to the care of your pediatric and adolescent patients.

FRIDAY P.M. ★ "HANDS ON" WORKSHOP ★ AND OTHERS

Choices will include:

★ Adolescent OB/GYN ★ Cardiology ★ Dermatology ★ Pulmonary Function Studies
★ ENT ★ Ophthalmology ★ "Puzzlers" Case Studies

FRIDAY EVENING

★Evening on the Town ★ Cardinal Baseball ★ Visit the Riverfront

SATURDAY A.M. ★ TRANSPLANTATION IN CHILDREN: THE STATE OF THE ART

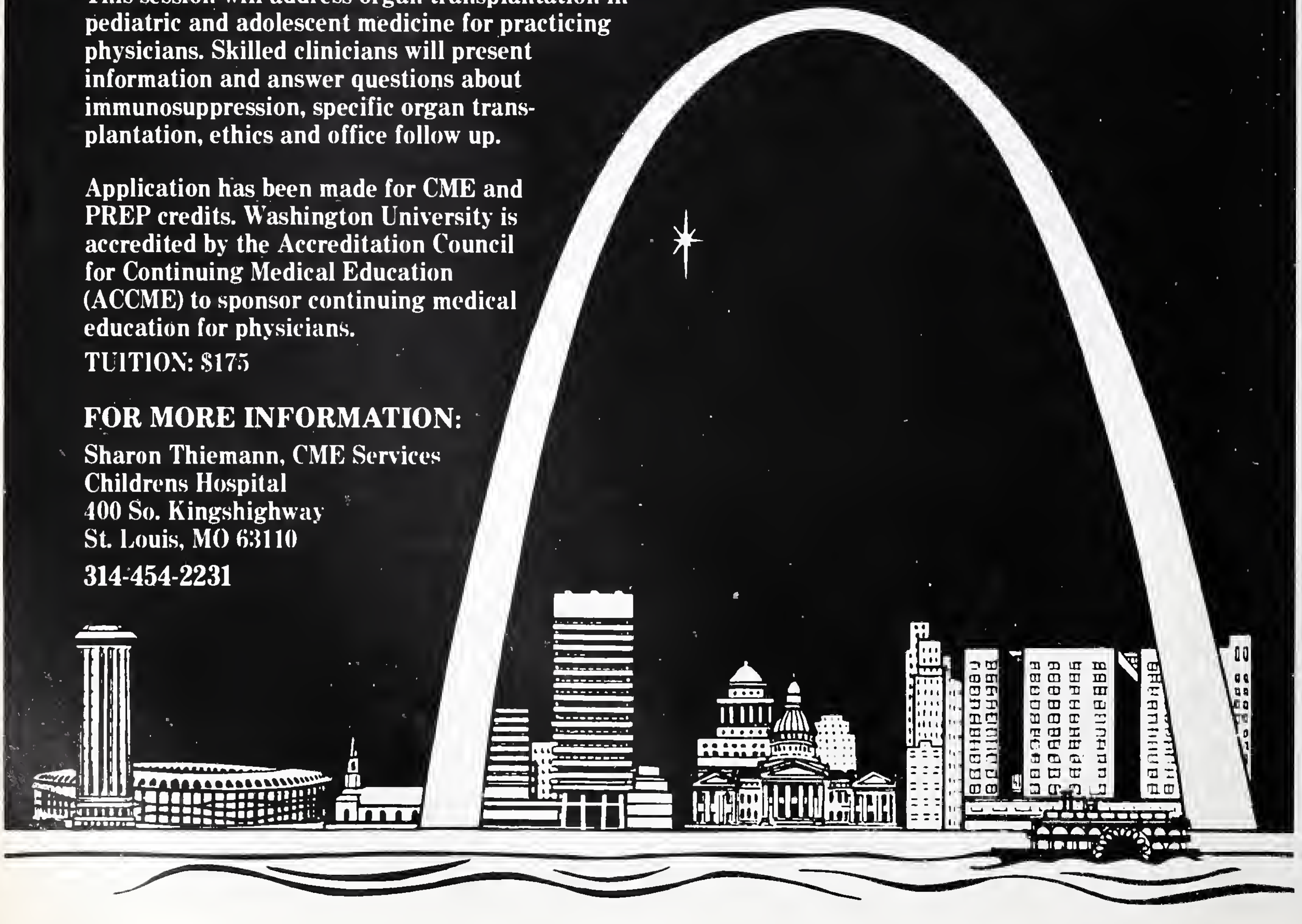
This session will address organ transplantation in pediatric and adolescent medicine for practicing physicians. Skilled clinicians will present information and answer questions about immunosuppression, specific organ transplantation, ethics and office follow up.

Application has been made for CME and PREP credits. Washington University is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.

TUITION: $175

FOR MORE INFORMATION:

Sharon Thiemann, CME Services
Childrens Hospital
400 So. Kingshighway
St. Louis, MO 63110
314-454-2231



Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

April

14-15 **Respiratory Critical Care** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

15 **Lymphoma Update 1988: New Diagnostic and Treatment Strategies** — Location: Jewish Hospital at Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

15-16 **Frontiers in Endoscopy** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

20-21 **Advanced Contact Lens Seminar** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

26-29 **Clinical Allergy — Inhalent and Food Sensitivity "Review and How-to"** — Location: Alameda Plaza, Kansas City, MO. Contact: Missouri Postgraduate Course in Allergy, Inc., 24-26 S. Main St., Suite A, Liberty, MO 64068. 816/781-0902.

28-29 **15th Annual Symposium on Obstetrics and Gynecology** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

29 **"The History of Cardiac Surgery presented by Michael DeBakey, M.D."** — Hearnes Multipurpose Center, Columbia, MO. Contact: Theresa Boley, RN, BSN, Department of Surgery, University of Missouri Medical Center, 1 Hospital Dr., Columbia, MO 65212. 314/882-6954.

29-30 **"Eating Disorders"** — Location: Hyatt Regency, Kansas City, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

May

9 **"Direct Digital Radiography"** — Location: Mallinckrodt Institute of Radiology, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

11-12 **Current Management in Critical Care** — Location: Alameda Plaza Hotel, Kansas City, MO. Contact: Linda Smutz, Kansas City Southwest Clinical Society, 222 W. Gregory Blvd., Suite 323, Kansas City, MO 64114. 816/523-3383.

11-14 **"Refinements in Free Flap Surgery"** — Location: Waldorf-Astoria Hotel, New York City. Contact: Edward H. Withers, M.D., Plastic Surgery Educational Foundation, 444 E. Algonquin Road, Arlington Heights, IL 60005. 312/228-9900.

12-13 **Pediatric Advance Cardiac and Trauma Life Support Provider Course** — Location: Cardinal Glennon Children's Hospital, St. Louis. Contact: Virginia Engel, Nursing Service Administration, Cardinal Glennon Children's Hospital, 314/577-5657.

13-15 **"Emergency Room Legal Environment: Medicine's Response"** — Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, St. Louis University School of Medicine, CME Office, 1402 S. Grand, St. Louis, MO 63104.

19-21 **Progress in Clinical Pediatrics IV: Advances in Hematology and Oncology and Transplantation in Children: The State of the Art** — Location: St. Louis Children's Hospital at Washington University Medical Center, St. Louis, MO. Contact: Sharon Thiemann, CME Services, Children's Hospital, 400 South Kingshighway, St. Louis, MO 63110. 314/454-2231.

20-21 **"Update on Breast & Colon Cancer: A Multidisciplinary Approach"** — Location: Ellis Fischel State Cancer Center, Columbia. Contact: Jack Wax, Director Program Development, Ellis Fischel State Cancer Center, 115 Business Loop 70 West, Columbia, MO 65203. 1/800-392-2545 or 314/875-2100 ext. 297.

21 **"3rd Annual One-Day Anesthesia Conference"** — Location: Detrick Auditorium, Christian Hospital NE. Contact: Department of Anesthesiology, Christian Hospital NE-NW, 11133 Dunn Road, St. Louis, MO 63136. 314/355-2300, ext. 5022.

23-24 **"Advanced Trauma Life Support"** — Location: Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, CME Office, 42nd & Dewey Ave., Omaha, NE 68105-1065. 402-559-4152 (Please note: This CME program also held August 4-5 and October 27-28 in Omaha. Contact Ms. Hanssen for information.)

June

6 **"Sudden Infant Death Syndrome: To Monitor or Not"** — Location: Marriott Hotel, Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, CME Office, 42nd & Dewey Ave., Omaha, NE. 68105-1065. 402/559-4152.

10-11 **"7th Annual Glennon Update Medical Genetics and Pediatric Cardiology"** — Location: Marriott Pavilion Hotel, St. Louis. Contact: Mary Hummert, Educational Coordinator, Room 202, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5638.

16-18 **AIDS and Infectious Disease Update** — Location: Hilton Resort, South Padre Island, Texas. Contact: Scott & White CME Office, 2401 South 31st St., Temple, TX 76508. 817/774-2350.

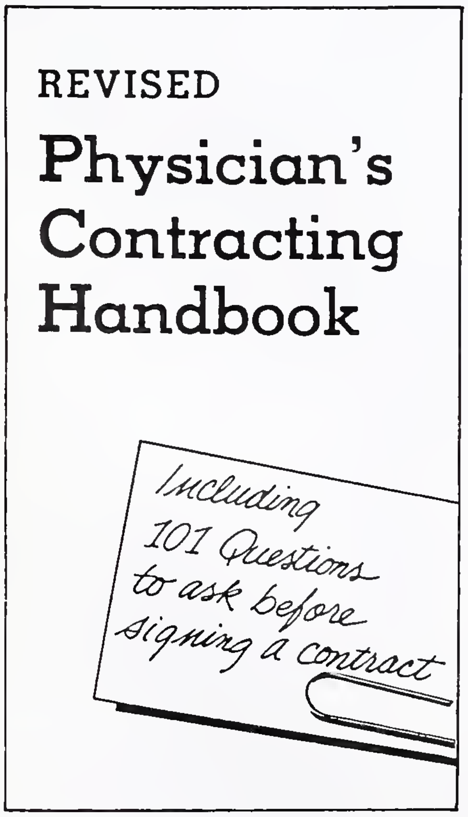
18-23 **Allergy: Back to the Basics in the Tetons** — Location: Jackson, WY. Contact: Missouri Postgraduate Course in Allergy, Inc., 24-26 S. Main St., Suite A, Liberty, MO 64068. 816/781-0902.

25-27 **Advanced Cardiac Life Support Provider Course** — Location: St. Louis University Medical Center, Learning Resources Center. Contact: Anita Herbst, CME coordinator, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

July

21-23 **Clinical Allergy for the Practicing Physician** — Location: Washington University Medical Center, St. Louis. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

Know what you're signing before you sign it


REVISED
Physician's Contracting Handbook
Including 101 Questions to ask before signing a contract

There is no shortage of business-minded organizations — HMOs, PPOs, and a variety of other entities — that would like to sign you onto their medical staffs. You may be knowledgeable about your medical specialty, but how do you decipher contract legalese?

How do you decide what clauses and provisions are in your best interest — and which could actually hurt your practice?

How do you determine when a contract would hinder your ability to make independent medical decisions, based on your patients' individual needs?

The MSMA has a new booklet that can help.

Developed and researched by the California Medical Association, the PHYSICIAN'S CONTRACTING HANDBOOK is a 56-page booklet that tackles specific contractual issues taken from actual contacts. By illustrating issues with actual contract language, the booklet points out typical pitfalls and shows how to avoid or renegotiate them.

The booklet concludes with a list of 101 questions you should ask before signing any contract for your medical services. A glossary defines essential antitrust terminology, and plain language clarifies sticky legal terms throughout the handbook.

Whether you are dealing with one business entity or a dozen, you shouldn't be without the information in the PHYSICIAN'S CONTRACTING HANDBOOK. The handy booklet is only $5.00 for MSMA members. ($15.00 for non-members)

Order your copy today. Send your check made out to MSMA to P.O. Box 1028, Jefferson City, MO 65102. ■

MISSOURI MEDICINE

Classified Advertising Form

1. Please print or type all information requested and return this form to Valerie A. Peters, Editorial Assistant, MISSOURI MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102. **Deadlines for publication are the first of the month preceding the month of publication.** The deadline is the same for cancellation of a current ad. For example: An ad to run in the November issue should be received by MISSOURI MEDICINE no later than October 1. An ad running in the October issue that the advertiser wants to cancel for November should also be cancelled no later than October 1. **Classified advertising costs:** $25.00 for non-members for the first 50 words or less, then 25¢ per word after that. The cost is $15.00 for members for the same ad, plus 25¢ per word beyond 50 words. File numbers cost an extra $1.25.

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Information for Contributors

Articles are accepted for publication on condition that they are contributed solely to this journal. Material appearing in Missouri Medicine is protected by copyright.

Manuscripts should be submitted to the editor, Jordan W. Burkey, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

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Rates: $15 per insertion for 50 words or less for members and $25 per insertion for 50 words or less for nonmembers, with an additional 25¢ per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City 65102.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count file numbers as five words.

File Numbers — Advertisers using file numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal file number, address letters as follows: File (insert number), c/o Missouri State Medical Association, P.O. Box 1028, Jefferson City, Mo. 65102.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

Physicians Wanted

Internal Medicine: West Illinois community of 35K with drawing area of 80K. Board Eligible/Board Certified physician to join established internist. Supported by 200+ bed hospital in family-oriented community with excellent neighborhoods and schools. Located 3½ hours from Chicago and 45 minutes from Peoria. Competitive compensation package. Contact Amy Evitts, TYLER & CO., 9040 Roswell Road, Atlanta, GA 30350. Call 404/641-6411.

Occupational Medicine Physician — to join well-established group practice serving over 200 industries. Excellent compensation and full partnership potential. Responsibilities include primary care, treating workmen's comp injuries, disability evaluations, medical surveillance, and development and implementation of occupational medical programs for various industries. Should be board certified/eligible, M.D. Send C.V. to: William R. Green, M.D., Macon Medical Center, 7200 Manchester, St. Louis, MO 63143, or call 314/645-7744.

Southeastern Iowa — Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

Private Practice Opportunities: Family Practice and Internal Medicine, attractive salary, excellent incentive compensation, liberal benefits including malpractice. Prospective for OB/GYN, Pediatrics, Psychiatry. Send C.V. to Don Hoit, Farris & Associates, Inc., 16216 Baxter Road, Suite 200, Chesterfield, MO 63017 (314) 532-4880.

Board Certified Psychiatrist, Chief, Psychiatric Service. Position available at the John J. Pershing VA Medical Center for the right individual to head newly approved Psychiatry Service with new inpatient program and established outpatient Mental Hygiene Clinic. The Medical Center is located in the scenic Southeast Missouri city of Poplar Bluff. The locality offers good local schools, outdoor recreational activities, and one of the lowest cost of living in the U.S. Excellent benefits such as 30 days paid vacation, 15 days paid sick leave, low cost health/life insurance, retirement plan with government matched thrift savings plan. No malpractice insurance required since coverage is provided by the Federal Torts Act. Citizens must be given first consideration, but physicians with permanent or immigrant visas may also be considered. Salary commensurate with qualifications (range $79,000-$88,000) based upon experience, training and board certification. Interested physicians should contact Don L. Andrus, M.D., Chief of Staff, John J. Pershing VA Medical Center, 1500 N. Westwood Blvd., Poplar Bluff, MO 63901, or telephone 314/686-4151, extension 201. AN EQUAL OPPORTUNITY EMPLOYER.

ENT, General Internist & Family Practice — needed for two-hospital, historic river town of 20,000. Drawing area of approximately 60,000 with new 19,000 acre recreational lake. Unlimited potential. Contact: Carol Murphy, Physician Recruitment, 623 Broadway, Hannibal, MO 63401 or call 314/221-3107.

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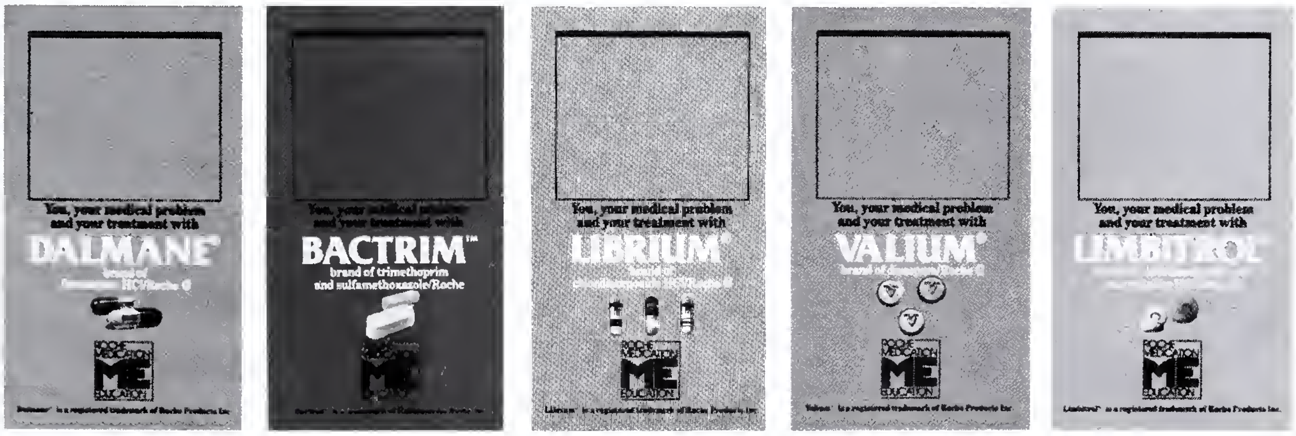

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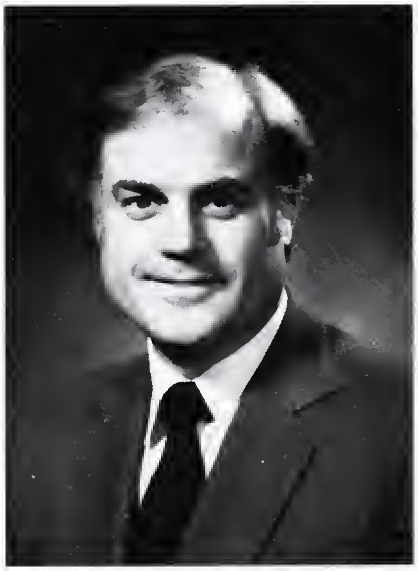
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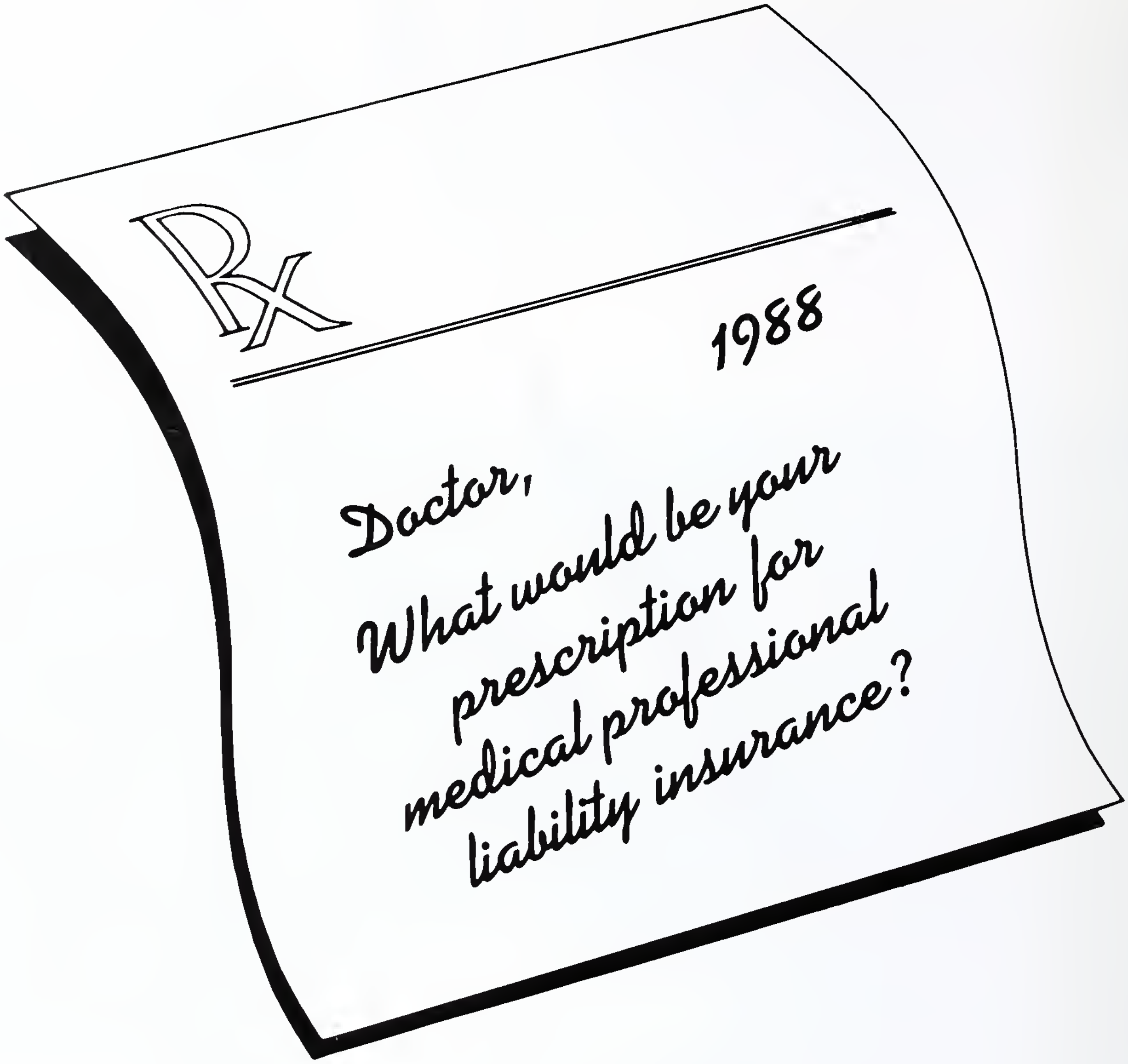
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"Wild Strawberries" photographed on the family farm between Martinsburg and Kingdom City, MO, by **Thomas E. Ford, M.D.**, a graduate of the St. Louis University School of Medicine. Dr. Ford is currently on a medical retina fellowship in Mishawaka, IN, and maintains his membership in the St. Louis Metropolitan Medical Society.

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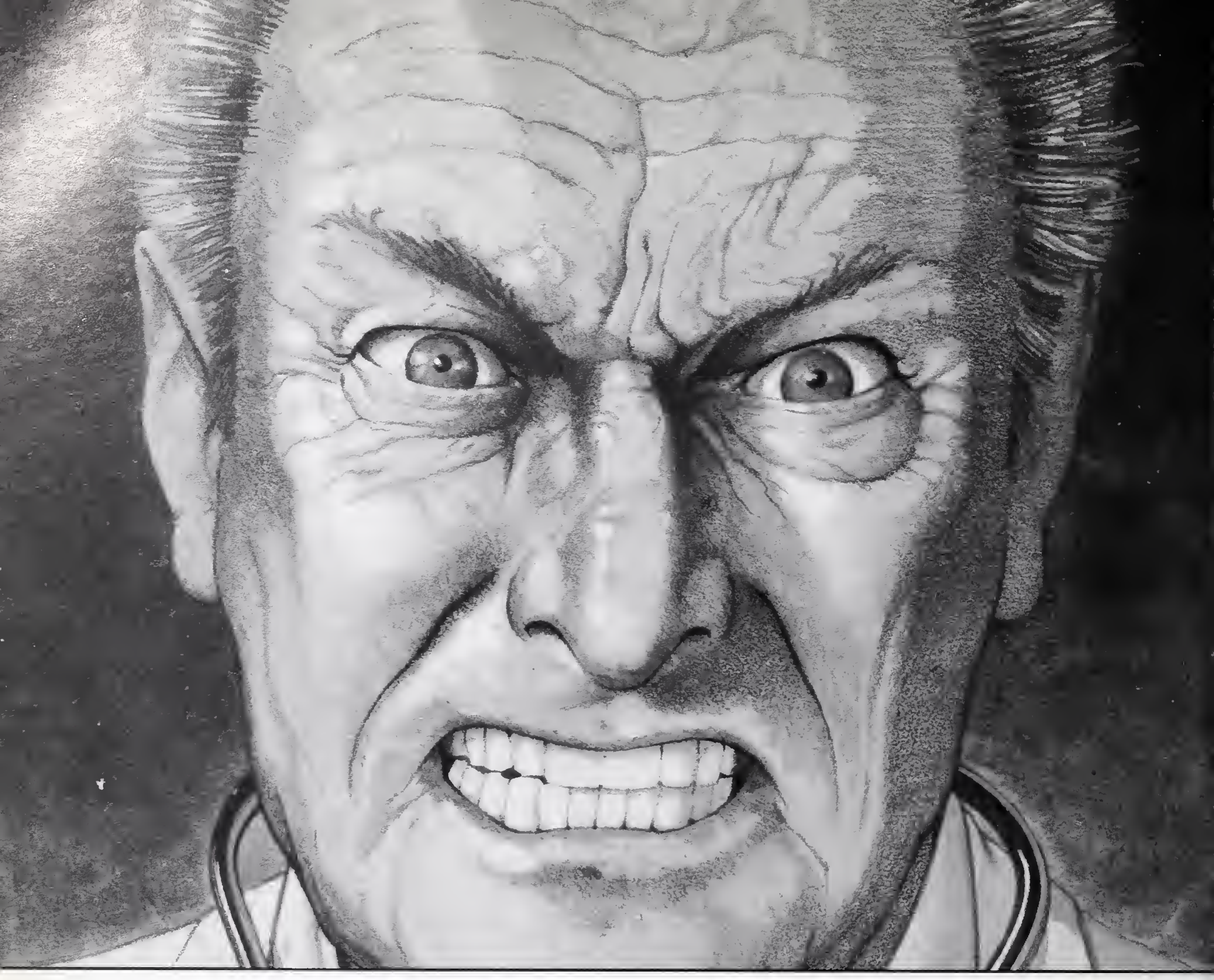

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MSMA Progress Notes

New editors for MISSOURI MEDICINE

Donald G. Sessions, M.D., of St. Louis begins his tenure as editor of MISSOURI MEDICINE with the May issue as does Ramona M. Chapman, M.D., of Joplin, the new associate editor.

An otolaryngologist, Dr. Sessions became the journal's associate editor in May 1985. He was associate editor of St. Louis Medicine from 1973-1975 and served St. Louis Metropolitan Medicine as associate editor from 1979-1982 and as editor from 1983-1984.

Dr. Sessions is a Professor of Otolaryngology at Washington University School of Medicine where he completed his medical degree in 1962. He trained in surgery at Vanderbilt Hospital in Nashville, TN and completed his otolaryngology residency at Washington University.

Director of the Chapman Regional Cancer Center in Joplin, Dr. Chapman is an oncologist. She has served as a reviewer for JAMA since 1981 in addition to being an editorial board member of the Journal of Clinical Oncology for three years.

Dr. Chapman is a clinical assistant professor of medicine at the University of Missouri-Columbia. She received her degree from the University of Tennessee Medical Units in Memphis in 1970. After completing her internal medicine residency, she did a fellowship in hematology/oncology at the Scripps Clinic and Research Foundation in California. She obtained further oncology training in London followed by service at Walter Reed Army Medical Center in Washington, D.C. Dr. Chapman moved to Missouri in 1982. ■

More *Missouri Register* updates

In the March 1, 1988 *Missouri Register*, the Department of Health proposed these changes in determining blood alcohol by blood, breath, saliva and urine analysis:

- A sample of blood, urine or saliva must be collected in a clean, dry, air-tight container with an inert stopper.
- For blood samples, if whole blood or plasma is required, an anticoagulant may be used that is appropriate for the test method being employed.
- Urine specimens should be refrigerated immediately after collection or a preservative may be used that is appropriate for the test method being employed.
- A sufficient volume of blood, urine or saliva shall be collected to provide for duplicate testing.

In addition, the Missouri Department of Social Services Nurse-Midwife program became effective on March 11, 1988. ■

MPH program begins in Jefferson City

St. Louis University is accepting applications for its Regional Master of Public Health Program that will be implemented in June 1988 in Jefferson City. Students complete the 36 hours required for the degree during two summer sessions as well as six hours of coursework during each of four semesters. The summer sessions consist of two, week-long sessions. Each of the fall and spring courses will be offered over two, three-day weekends.

Financial aid is available. For more information contact: Kim Douglas, Admissions Coordinator, St. Louis University CHSER, 3525 Caroline St., St. Louis, MO 63104. 314/577-8682. ■

Obstetrical and newborn services

Effective March 26, 1988, the following rule regarding organization and management for hospitals became effective, as published in the March 15 *Missouri Register*. The rule revises the language that required the physician to be immediately available. The revision states that women in labor who receive intravenous oxytocin must be under continuous observation by trained personnel. The drug may be administered for induction or augmentation of labor only if a physician has evaluated the situation, determined that the procedure is beneficial to the mother and/or fetus, recorded the indication and established the plan of management. This physician must be available to manage any complications during the infusion. In addition, a physician must be consulted and available in case a Cesarean section is performed during the delivery. ■

1988 House of Delegates actions

During the 130th Annual Meeting March 17-20 at the Hyatt Regency in Kansas City, the 1988 House of Delegates acted upon 41 resolutions. A brief listing of the resolutions adopted by the House follows. The July issue of *Missouri Medicine* will contain a complete report of the 1988 House of Delegates proceedings.

***Waiver of MSMA Dues for Political Officeholders.** Beginning January 1, 1989, MSMA will waive dues to any MSMA member elected to U.S. Congress, state legislature or executive branch of the federal or state governments, and will continue to do so until the member's political term expires. MSMA encourages the component societies to follow suit.

***MSMA Bylaws Regarding Hospital Medical Staff Section.** Requires that physicians participating as HMSS members be members of MSMA.

***Physician Prescribing and Pharmacist Dispensing.** Supports the physician's right to dispense drugs and devices when it is in the best interest of the patient and consistent with the AMA's ethical guidelines.

***Protection of Life: All-Terrain Vehicles.** Has the MSMA publicize through educational programs the dangers of all-terrain vehicles, especially to persons unlicensed to drive other vehicles.

***Mandatory HMO Enrollment.** Calls for MSMA to oppose employer's mandatory enrollment in a Health Maintenance Organization for employees.

***Indigent Care.** Urges all physicians to share in the care of the indigent.

***Notification of Physicians When a Patient is HIV Positive.** Urges MSMA to develop and distribute guidelines and identify risk factors for all health professionals caring for AIDS and HIV positive patients. In addition, create a policy so that physicians may discuss in a confidential manner and with legal immunity AIDS/HIV positive patients with other health care professionals involved in their care. This will affirm MSMA support for dignity of all patients and alleviate acts of medically unfounded discrimination against patients because of their medical condition.

***Encroachment of Third Parties.** Urges MSMA to educate physicians and lay people through the journal and its public relations program regarding the effects of government, large hospital corporations and insurance companies on the quality of medical care.

***Access to Quality Health Care.** Urges MSMA to lobby against state legislation mandating Medicare assignment as a condition of licensure and other related proposals.

***Medicare Mandated Restrictions.** Urges MSMA and AMA to create a policy opposing mandated restriction of work up, labs, referrals or financial arrangements between physician and patient when such an arrangement can be based on a realistic, documented work up.

***Strategy for Further Tort Reform in Missouri.** Has MSMA study the AMA Alternative proposal and be prepared with proposals for the liability crisis for the next Coalition to Preserve Health Care meeting; also has MSMA prepare a plan by 1989 to file with the state legislature by January 1990 regarding professional liability.

***Science Education in Schools.** Urges MSMA to work with AMA Council on Scientific Affairs and various science and education organizations to increase interest in and to improve science education in the nation.

***Insurance Restrictions Due to Psychiatric Treatment.** Has MSMA investigate discrimination in obtaining life or health insurance for Missourians who have had psychiatric treatments. Once results are obtained, share with the Missouri legislature and AMA for possible action.

***Office Care and Treatment Determined Unnecessary by Medicare.** Has criteria for pending denial of Medicare Part B coverage be publicized; has MSMA urge Medicare to obtain physician review prior to denial of Medicare Part B reimbursement, and inform physicians of appeal process in addition to having Medicare notify physicians prior to impending denial to allow for appeal; and urges Medicare not to notify patient of denial until appeal process is exhausted.

***Formation of Young Physicians Committee.** Representatives from around the state will focus on issues of concern to young physicians.

***DRGs for Rural Hospitals.** Has MSMA recommend to the government that the lower payments to rural hospitals as compared with urban hospitals for identical DRGs are unfair and the differential should be abolished. MSMA's AMA delegates should take this resolution to AMA House of Delegates.

***Disability Insurance for Physicians with Infectious Diseases.** Requests the AMA to encourage insurance carriers to pay appropriate disability income to potentially infectious physicians and other health care providers who restrict or cease practice to minimize risk of

Continued on page 240

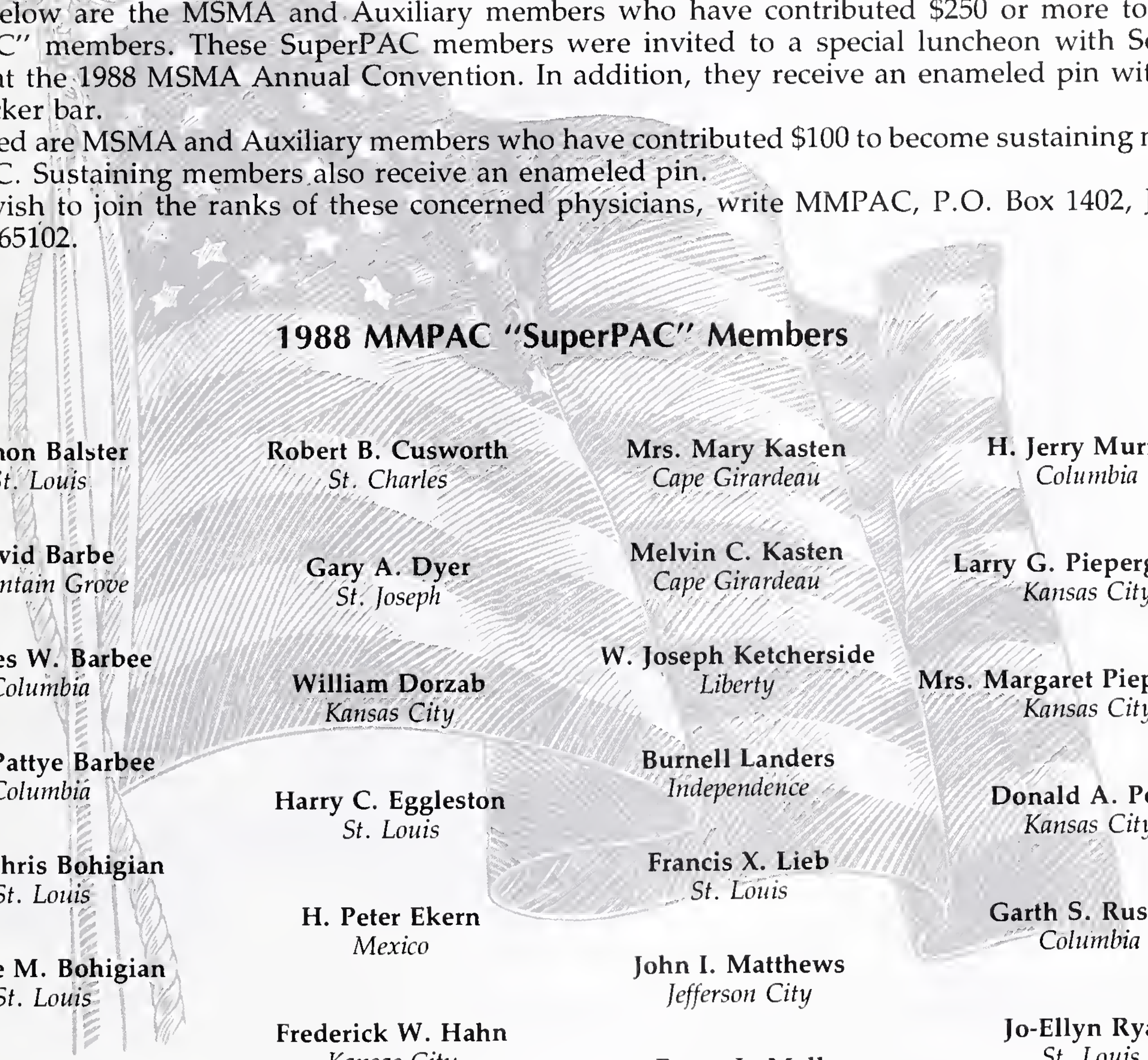
1988 MMPAC Members

The Missouri Medical Political Action Committee (MMPAC) is a voluntary committee of Missouri physicians and spouses who contribute funds to aid in the election of Missouri candidates to the state legislature and U.S. Congress. The committee financially supports those candidates whose philosophy is similar to that of the medical profession.

Listed below are the MSMA and Auxiliary members who have contributed $250 or more to become "SuperPAC" members. These SuperPAC members were invited to a special luncheon with Sen. John Danforth at the 1988 MSMA Annual Convention. In addition, they receive an enameled pin with a decorative rocker bar.

Also listed are MSMA and Auxiliary members who have contributed $100 to become sustaining members of MMPAC. Sustaining members also receive an enameled pin.

If you wish to join the ranks of these concerned physicians, write MMPAC, P.O. Box 1402, Jefferson City, MO 65102.



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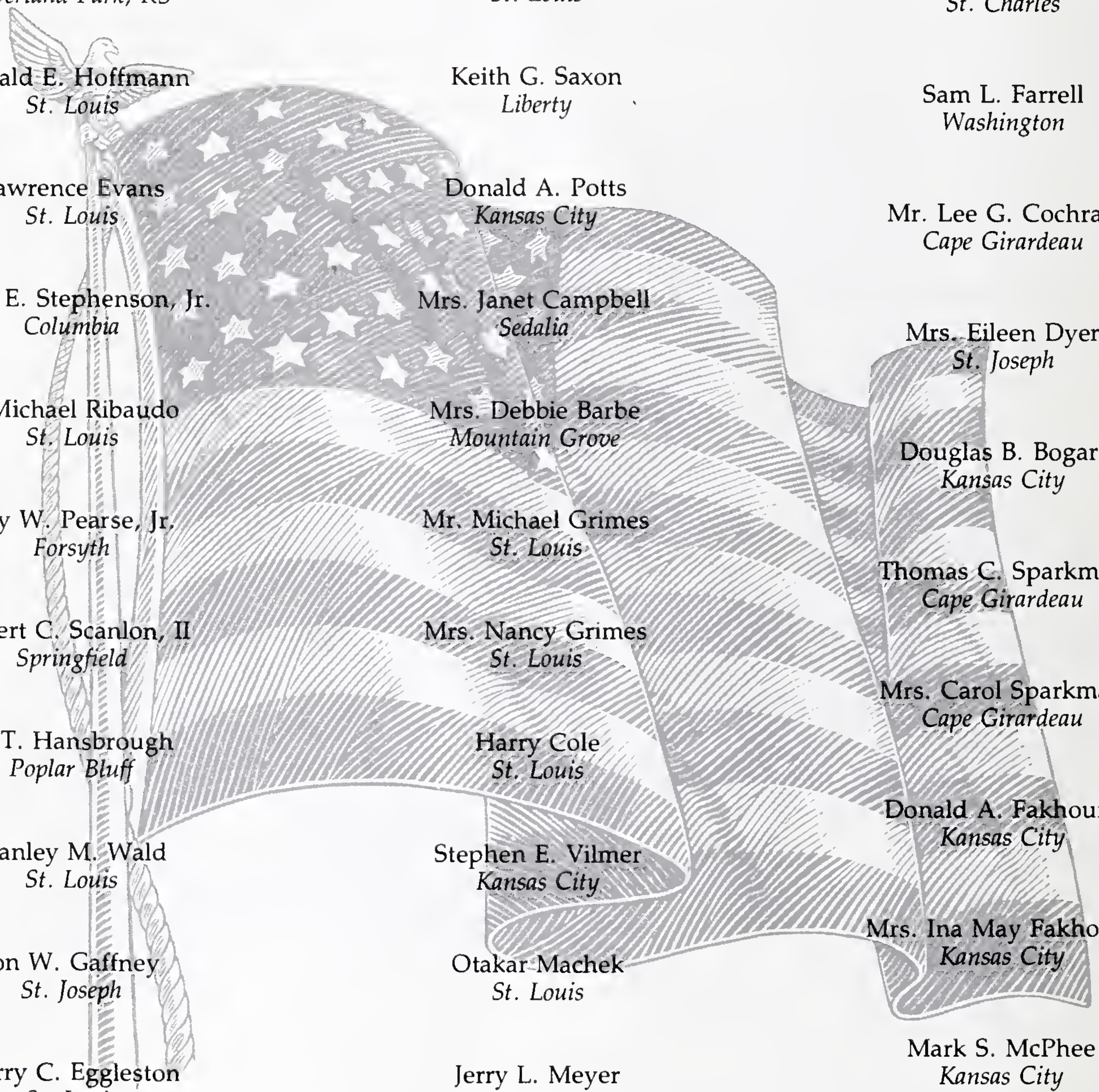

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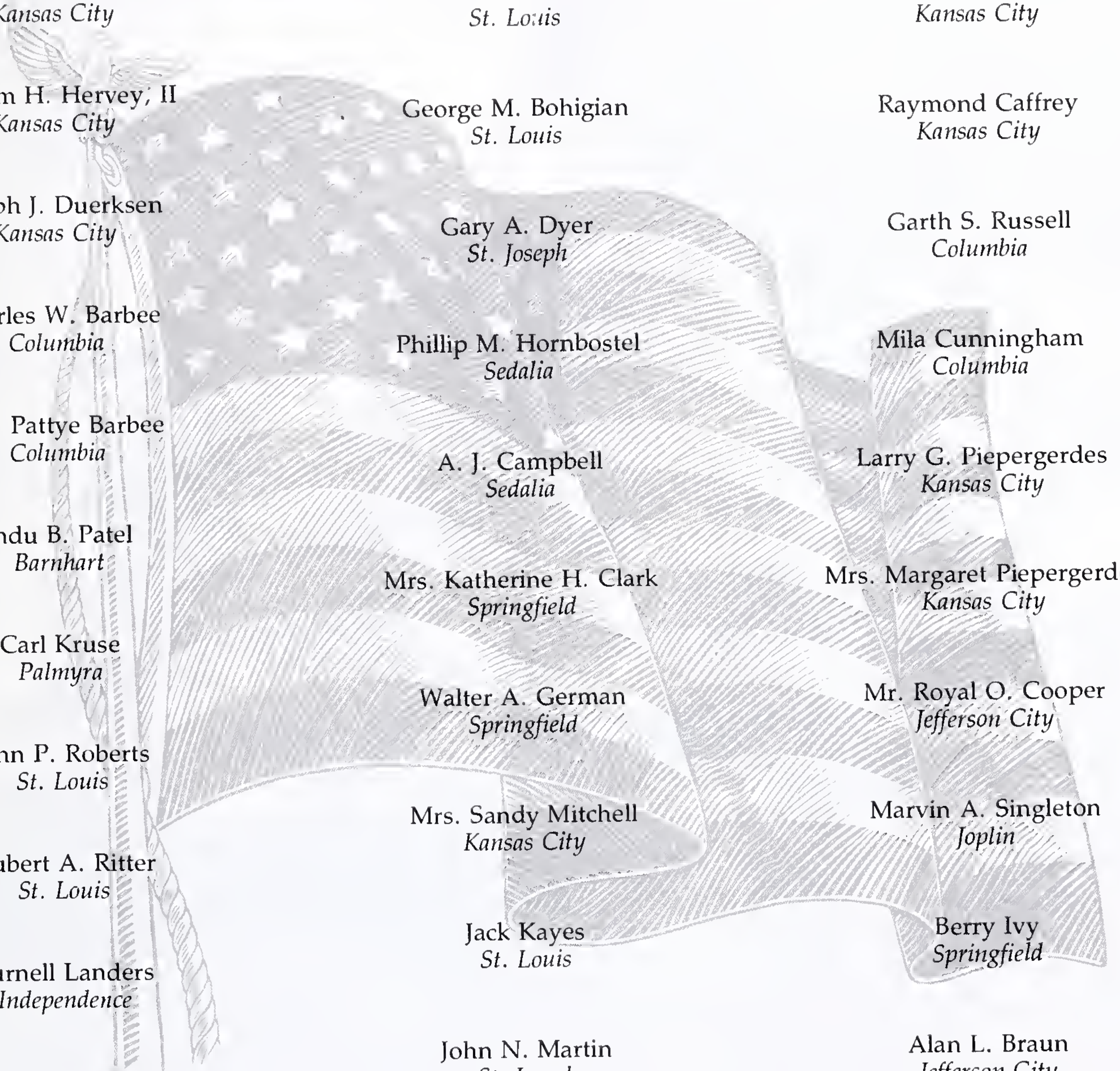

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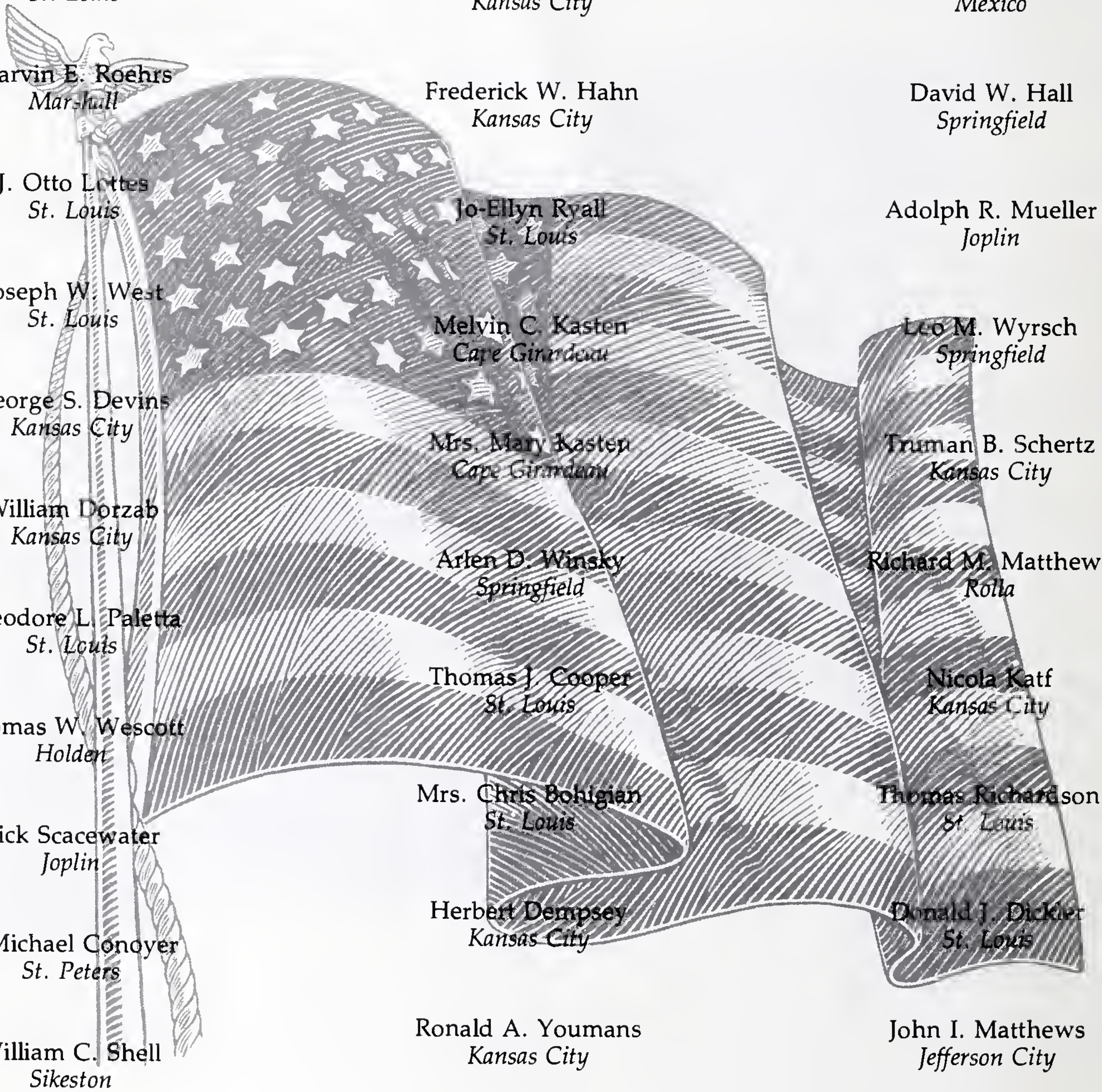

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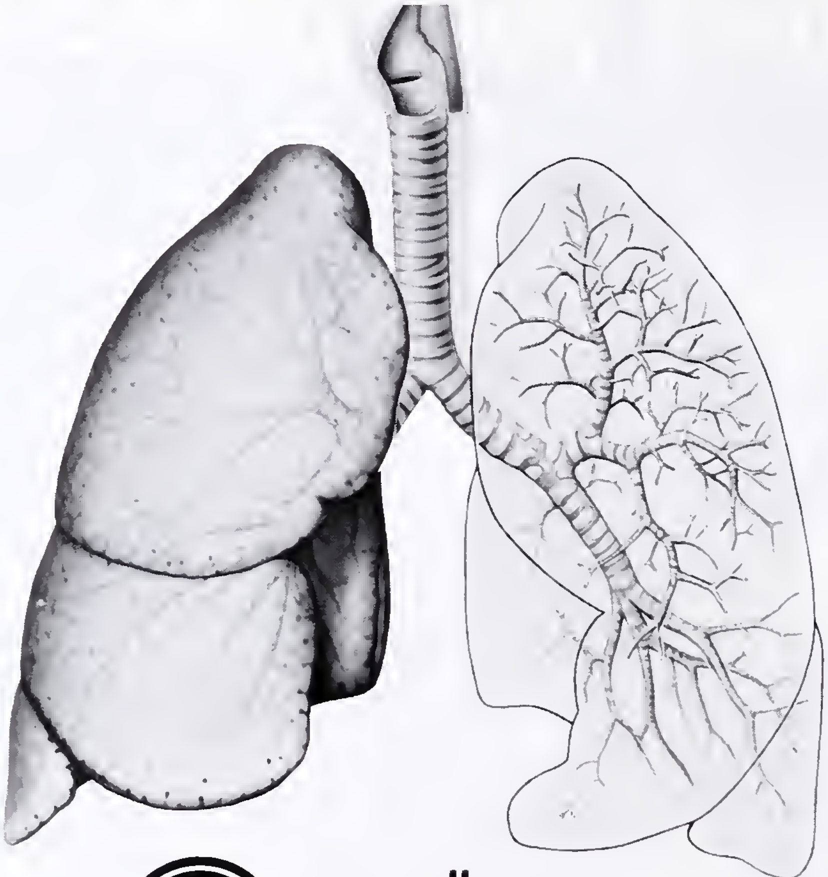

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Haemophilus influenzae and *Streptococcus pneumoniae*
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Summary. Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061787L]

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EDITOR'S DESK

by Donald G. Sessions, M.D.
Editor

The major issue doctors face today is the basic question of why or how one human being comes to trust another.

New kid on the block

When I was growing up in a small town, everyone not only knew everyone but also literally knew what everyone else was doing. It was particularly exciting for us when there was a "new kid on the block." We couldn't wait to run over and meet him, to find out where he was from, to find out what new toys he had, and to just see what he was like. In those days we didn't think much about being embarrassed and going over to meet the new kid. We just rushed over kind of headlong and introduced ourselves and started playing right away.

I'll do the same now. I'm the new kid on the block at *Missouri Medicine*. My job, as I see it, is to have your journal represent you and what you are up to in life. I'll be addressing some old issues, some issues you thought you had handled, and some new issues. I'll be addressing some issues that are very comfortable for you, some issues that are boring, and some that are uncomfortable.

My intention is to inquire about some fundamental concerns regarding what it is to be a doctor. This, of course, will touch upon what it is to be a human being. Our natural inclination, as doctors, is to come up with the answer. Then, when we get the answer, the inquiry stops. Patients do not come to us to inquire about their health concerns. Maybe they should. In fact, they come to us for the answer. They even pay us for the answer.

The kind of inquiry that I have in mind is one whose answers actually generate further questions. I will, then, be taking a new path, one that places inquiry at the same level as finding the answers. Hopefully we will derive some satisfaction as we dance with the questions.

Our profession is in a period of profound change. Many of us react to this situation by longing for the good old days and steering our young people into other fields. "It just isn't fun anymore," some say. They seem to want to cut their losses and fold. Others of us see this period of transition as a time to be creative. These people are willing to risk the wrath and approbation of those more comfortable, in an attempt to come up with something workable.

Most of us watch from the sidelines waiting for something to happen. It usually does.

Much of what I write will be about the "conversation" we live in. This is important since everything we do as human beings involves language. Conversations occur as the spoken or written word, but most conversations appear as thoughts in our heads (or wherever it is that our thoughts occur).

Our profession is demanding, consuming, stressful, impossible and wonderful. With the challenge of being a physician we still are afforded instant respect and credibility. We have the opportunity for instant intimacy. This brings within it a responsibility that is a privilege which sometimes looks like a burden.

Patients do listen to us. We actually have their attention. That is why it is so important for us to be totally honest with them about what we can and cannot do; about what they can expect and count on from us and, even more important, what they cannot count on from us.

The major issue doctors must address today is not economic or scientific but the basic issue of trust. It is the question of why or how one human being comes to trust another.

It is difficult for us to admit that our patients don't trust us. Yet second opinion programs are not entirely motivated by economics. Patients don't have to be brilliant to recognize that sometimes the treatment suggested by their doctors can be dangerous. A major question that arises is whether patients have a basic fear and distrust of the medical technology that has made us so successful in lengthening the life span, or the people that wield it, or both. It is this and similar questions that we will address.

I do have one request. If it gets too heavy let me know. This job and your life should be filled with dignity and joy. At least that's my aim for it. ■

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PRESIDENT'S PAGE

by T. J. Cooper, M.D.

Unfortunately, many of us believe that non-involvement equates with respectability.

Non-Involvement Equates With Respectability

One of the most pernicious traps that physicians and/or their spouses fall into is the idea that non-involvement equates with respectability, or put another way, those who become involved are not truly respectable. This then allows one to avoid all responsibility and feel good about it.

A respected physician once told a group of us that his observation through the years was that many of medicine's problems have come about not so much by others wishing to practice medicine, but by the fact that we physicians have allowed vacuums to develop in our profession that suck in those on the outside. Many para-professional functions were at one time under the control of physicians, but by inattention, they, the para-professionals, have carved out a niche for themselves.

The process continues as evidenced by the ever-increasing number of bills in the legislative hopper in Jefferson City that would allow some aspect of medicine to be usurped by non-physicians. Are physicians concerned? Not likely, if you count the number who will give up one day to come to Jefferson City and visit with their Senator or Representative. Every physician should visit with his U.S. Senator, State Senator, U.S. Representative and State Representative at least once a year. An axiom of politics is that the legislators presume that you agree with their actions unless you tell them differently.

So, be not involved and watch as more and more of the decisions affecting you and your patients are made by those whose interest is not in you or your patients. ■

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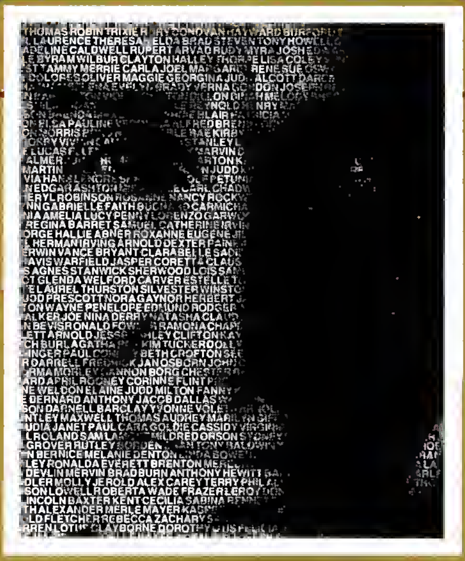

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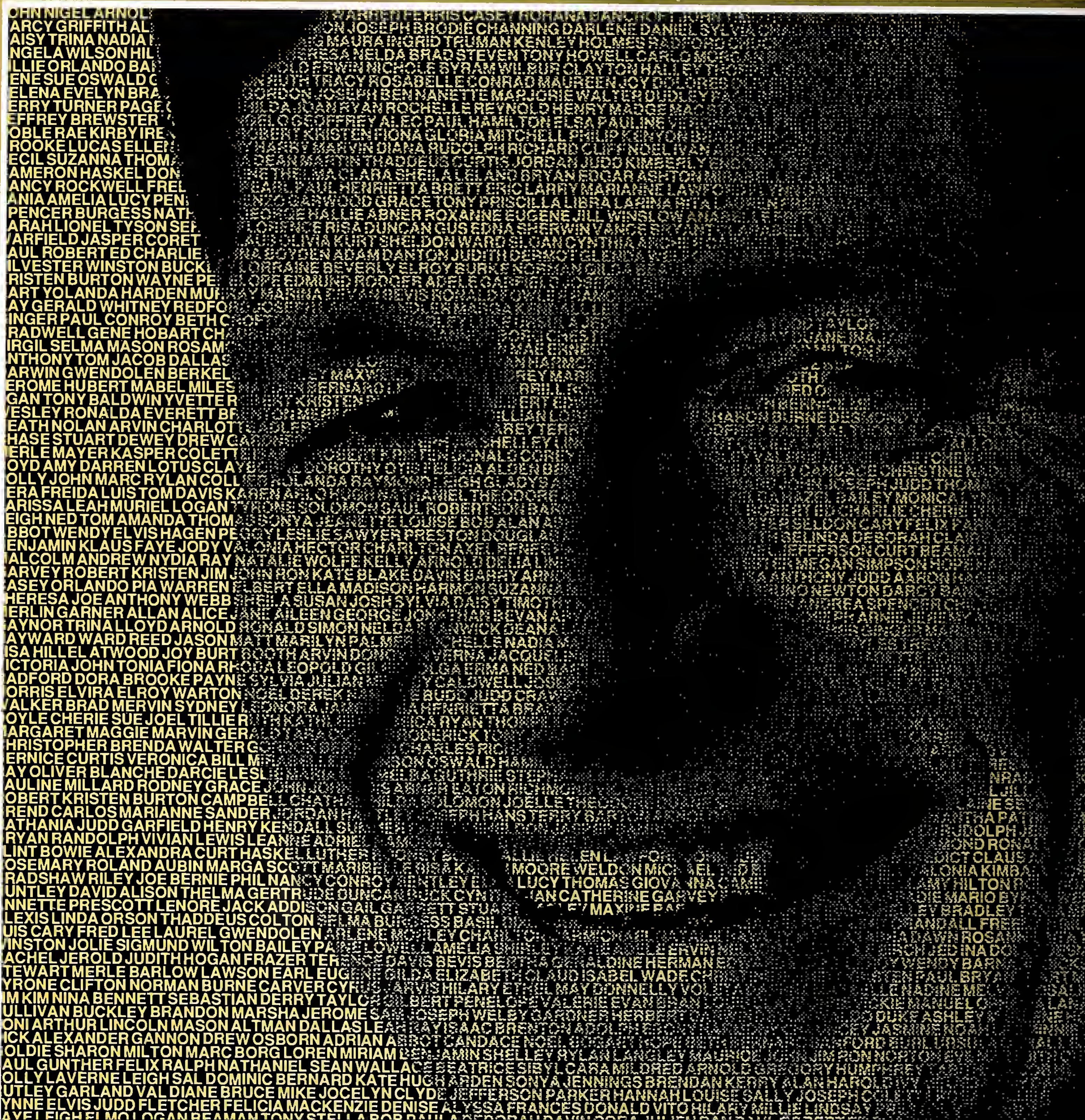
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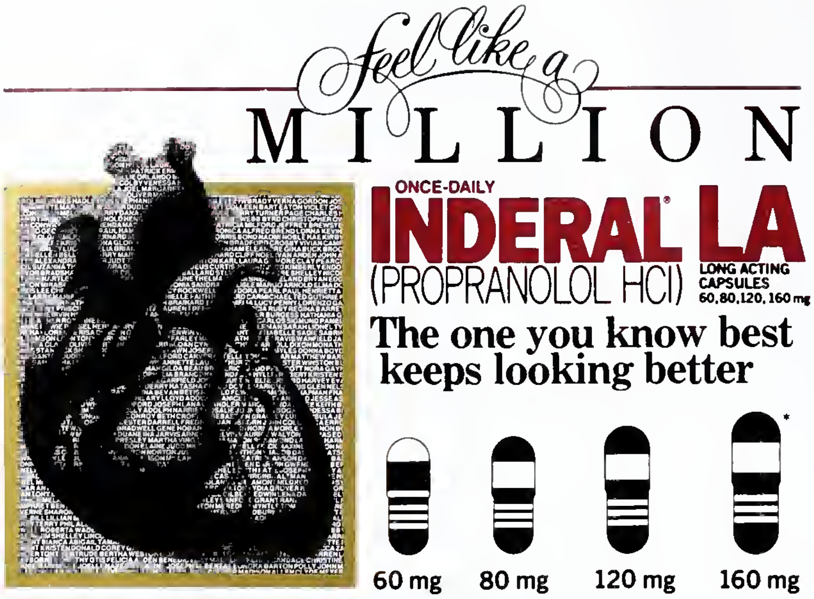

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, *phenobarbitone*, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

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Auxiliary Message

by Eileen Dyer
MSMAA President

I look forward to visiting in your counties . . . working, laughing, and learning with each of you as we move forward for our families, friends and the future of medicine.

Auxiliary begins 1988-89 program

It is with great anticipation and some anxiety that I stand before you today. Some may say . . . Good Grief! She's been around forever . . . it's about time to move her on. I guess I have been through a few positions the last ten years on the State Board. But I am always learning new things, and in some cases I was a slow learner and had to do it several times! My dear husband says if you're green you're still growing, and I definitely am still green and with your help and support will still grow this coming year.

I want you to know the reasons I took this job and the very reasons I have stayed committed to Auxiliary work for so long: it is because of my family, my friends, and the future of medicine.

Gary and I enjoy colonial architecture and decoration, so the idea of a pineapple as a symbol came to mind. Generally a pineapple symbolizes hospitality and friendship, and I felt that this conveyed the spirit of my theme idea.

However, when you see my pineapple you will always see three parts to it . . . the base, the body, and the top.

The green base represents our families: our stability, the source of our growth and security. The body of the pineapple represents our friends: the opportunity to grow, to learn, to develop; to contribute to our friends in the medical community as well as our civic communities; to help improve the quality of life for both. The growth at the top of my pineapple represents the future of medicine: our chance to influence the way medicine will go, with our legislative efforts and support of medical education and research.

As we look forward to a busy year ahead in health projects, legislation, and support of medical education and research, we are keenly aware that we must have an active, growing membership.

Jan Storms, incoming president of Oklahoma and I have challenged each other to a board to board membership challenge for this year. We're calling this "One + One = Back to Basics With Board Partners." I have also accepted a challenge from my good friend in Iowa, incoming president Jan Bannister. We are challenging each other to an overall state membership increase this year! As a membership incentive, we have original glass art work to award. A full dues-paying member will receive it at next year's St. Louis Convention. Joe Skeeba, a good friend and talented artist, etched and carved the pineapple on glass and donated a large portion of this piece to benefit our Auxiliary.

Each county will receive a photo of the glass art and an explanation of Joe's work to help promote membership.

New AIDS booklets for teenagers were purchased by MSMA and will be distributed

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largely by the Auxiliary to high schools across the state. Educational efforts are more readily accepted through school districts now than ever before. We feel our AIDS material is appropriate for the teenagers we so dearly love, and want to help to be prepared for the issues they must face in life. We will also be working on smoking education, and smokeless tobacco education, as well as continuing our support of teen suicide prevention programs beginning in many areas. Our new cassette/video tape library will contain information on health issues collected from many quality meetings and speakers. These will be used for board training, meeting programs, and educational endeavors.

A political involvement effort can never be more timely than right now. Each personal contact, letter, phone call is so critical to our future in medicine and the preservation of the high quality of medical care we now have. We will continue our successful legislation day next March and focus on key contact training and alerting members to current issues and bills.

Medical research and medical education continue to be supported through our fundraising efforts in AMA-ERF and the Missouri State Medical Foundation. We secure our future by actively supporting these efforts through Christmas Sharing Cards, contributions in appreciation of medical services, and state fund raisers. I hope each member will feel the importance of their individual contribution.

We look forward to continuing cooperation between the medical society and the Auxiliary. We have greatly enjoyed visiting several county society and auxiliary meetings at the same time that the state society representative was making his visit. It has been a fun, educational, and supportive relationship that will continue in the coming year. Dr. T. J. Cooper, incoming MSMA President has expressed his sincere interest in working with the Auxiliary and we will welcome his ideas and areas of concern as we work together. The MSMA has asked the Auxiliary to provide an auxilian member on one more committee . . . the Public Affairs Commission. We are delighted to assist this commission in their work, and will continue to have an Auxilian serving on Physicians' Rehabilitation Committee, Missouri State Medical Foundation, and the Legislation Committee as well.

We have so much to look forward to . . . starting with four leadership workshops in early May, and ending with convention next April in St. Louis.

I look forward to visiting in your counties . . . working, laughing, and learning with each of you as we move forward for our families, friends, and the future of medicine. ■

■ Progress Notes

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infecting their patients.

***Resident Workload Study.** The MSMA Commission on Continuing Education and Health Manpower will ask Missouri residency programs to do self-studies on resident hours and ancillary work. Results will be used as documentation in case legislation is introduced.

***Right to Hospital Privilege.** That MSMA opposes granting hospital privileges on the basis of the physician's profitability to the hospital.

***DOSS Discrimination Questionnaire.** Asks DOSS to change its established procedure so that physicians are not required to perform racial questioning.

***Development of Different DOSS Questionnaire for Physicians Offices.** Asks any and all friends of medicine to have DOSS develop a different and more appropriate questionnaire if one is needed to comply with federal Medicaid requirements. All physicians should be notified of present policy so that they may re-evaluate whether to continue in Medicaid program or voluntarily withdraw to avoid being compelled to answer self-incriminating questions.

***Workers Compensation System.** Calls for MSMA to create an ad hoc committee to investigate suggestions for changes in the Worker's Compensation System in the state.

***Medicare Requirement of "Medically Unnecessary Denial" Forms for Non-Participating Physicians.** Has MSMA and AMA oppose the requirement that a physician have patients sign statements indicating or suggesting that medical services may or will be considered "medically unnecessary." ■

Croughan head of PRP

St. Louis psychiatrist Jack L. Croughan, M.D., was recently appointed medical director of the MSMA Physician Rehabilitation Program (PRP).

Dr. Croughan obtained his medical degree from the University of Kansas and completed his psychiatry residency at Washington University School of Medicine in St. Louis. He is currently an Associate Professor of Clinical Psychiatry at Washington University. Dr. Croughan will be assisted by program coordinator JoAnne Hodgman.

The new PRP phone number is 314/768-4990. ■

Letters to the Editor

Thanks, MSMA!

Dear Dr. Sessions:

I want to express my gratitude to the Missouri State Medical Association for allowing me to attend the annual convention as a student delegate. I feel that the convention and the proceedings are going to be a great asset to my medical education. I am looking forward to future involvement with MSMA.

Thank you for your gracious hospitality and your interest in medical student representation.

Sincerely,
Lora A. Mills
M-1
UMC School of Medicine
Columbia

Wishing Dr. Olson victory

Dear Dr. Sessions:

I have never written a letter to the editor of a journal before, but after reading your article on Dr. Rule Olson, from Springfield, Missouri, I felt that the time had arrived.

The amazing thing that should be noted is that this article did not surprise me in any way. I became infuriated while reading it to think that a bureaucracy could be so incompetent as to do such a thing to a fellow physician, but I was not surprised by what I read. I feel that the practice of medicine is becoming more and more a battle with the bureaucracies, both Medicaid and Medicare, and it is definitely taking up physicians' valuable time that could be spent much more efficiently on patient care.

I fully support Dr. Olson's battle with this DOSS bureaucracy. I certainly hope he wins his battle with them and his reinstatement into Medicaid if this is what he wishes. Personally the percentage of Medicaid patients I see is a small part of my practice, but should I receive a questionnaire, which I have not to this date, and had the same problems as Dr. Olson, I would unlike Dr. Olson, beat Medicaid to the punch and cancel my contract with them before they could throw me out. I would continue to see patients should this occur, because I feel patients require medical care whether they have Medicaid or not. Like Dr. Olson, I do not care about their religion or race.

I wish Dr. Olson the best of luck against this DOSS bureaucracy. I might add if DOSS has to have this information so badly that they request it from Dr. Olson, why don't they put one of their bureaucrats in every physician's waiting room in the state of Missouri and collect the data themselves.

Sincerely,
James K. Hunter Jr., M.D.
Fairfax, MO

"Medically Unnecessary Services"

Dear Dr. Sessions:

"What has organized medicine done for me lately" is a frequent complaint by physicians.

Many of our patients have received letters stating that care provided by us is "medically unnecessary." This letter has been sent to our patients before we have received a copy and have had a chance to respond to our Medicare carriers. Medicare has recommended to the physicians that they may have the Medicare patient sign a form in advance of care stating that the "service will be denied because it is medically unnecessary." This policy interferes with well-established doctor/patient relationships and erodes patient confidence.

What is organized medicine doing about this? We are attacking at three levels — local, state, and national.

1. Local: Medical Society leaders, e.g. Jack Kayes, President of the St. Louis Metropolitan Medical Society, have met with local Medicare carriers and explained our concerns.
2. State: Five resolutions concerning this topic were brought and acted on by the Missouri State Medical Association's House of Delegates on March 20, 1988. These will be forwarded to the appropriate Medicare carriers and the American Medical Association for further action.
3. National: The AMA has vigorously opposed this unfair treatment as a result of misapplication of the Omnibus Budget Reconciliation Act of 1986. This is being done at the highest levels according to the Administrator of the Health Care Finance Administration and also to Congressmen. Since Medicare "interprets and follows" the laws set by Congress, it is Congress and the regulators who need to change this interpretation of the laws. This issue will probably be on-going and not until early summer can we look forward to some relief.

But organized medicine is doing something by using it's collective clout.

Sincerely,
George M. Bohigian, M.D.
Chairman, AMA Delegation from Missouri, St. Louis

Editor's note: *In the April* Missouri Medicine, *T.J. Cooper, M.D., MSMA President, explained the Doctor Card Program that the MSMA Council is developing for Missouri physicians and their Medicare patients. Dr. Cooper has received a lot of media coverage in regard to the program, and the coverage has increased public interest. Here are responses to the program and the media exposure it has received.*

Dr. Cooper praised

Dear Dr. Cooper:

I wish to congratulate you on your appointment as president of the Missouri State Medical Association. More importantly, I wish to thank you for your belief the medical profession should do something about accepting Medicare assignment.

I am a senior citizen or, if you will, a member of the endangered species. My husband and I both have heart conditions and wear pacemakers. A year ago my husband developed cancer of the lung. I spent thirty-five years in the nursing profession, and obtained a Social Security card when first started by President Roosevelt. I believed when you were of an age to retire and if you had a home paid for, you could survive — not so. One must now be very wealthy or very poor. There is no longer the healing arts as I knew the medical field. It has become the big business of the Eighties.

We pay almost $120 a month for supplemental insurance. The benefits are reduced every year. We must now pay $300 for each of us before they pay 80%. I received a letter from a U.S. congressman recently stating some of the benefits of catastrophic insurance. He stated after we each used $600 in medicine it would reimburse us for the rest of the year but we would pay for it from our Social Security check. **THIS KIND OF INSURANCE WE DON'T NEED.**

The statement in the news was that if you had a bill from the Dr. for $50, Medicare would reimburse you about $40. A recent bill of $62 was approved for a total of $51 of which Medicare paid $40.88 but then due to a new law they reduced the payment by 2.324% paying a total of $39.93.

I appreciate your concern for the elderly and wish you well and may God bless you in your efforts.

Sincerely,
Gertrude E. Storts
St. Louis

More praise . . .

Dear Dr. Cooper:

On a KMOX newscast this past week, I heard that the president of the Missouri State Medical Association had asked the membership to consider keeping the bills of the aged and the poor within the allowments of Medicare/Medicaid.

I do whole-heartedly applaud and thank you. May God's blessings rest upon and within you and your works.

Sincerely,
Chloe C. Woods
St. Louis

. . . and some pressure

Dear Dr. Cooper:

I am writing to address your recently publicized plan to promote accepting of Medicare as payment in full by medical doctors. As an opthalmologist, I have seen government intervention freeze fees since 1983, eliminate any payment for surgical assistant fees at cataract surgery (even if the patient desires this safety factor and is willing to pay themselves), increasingly confusing CPT coding causing incredible difficulties for doctor and patient alike, and most recently, requirements to refund the doctor's fee to the patient if "all knowing" Medicare decided that a visit is "unnecessary." What other professional or non-professional group would tolerate such harassment?

Now, you wish for private practitioners to believe that the majority of Medicare patients are in "poverty" and that such a categorization could be determined by an organization (such as AARP) which would simply "ask" each Medicare recipient whether they can "afford" to pay for medical care. What would the "smart" answer be to that question? Although there are obviously some truly poverty stricken Medicare recipients, I believe that the vast majority of Medicare recipients are very capable of paying reasonable fees for average medical needs.

My practice is located in a very middle class area and I know that most of my Medicare patients live a very comfortable lifestyle; eating out regularly, traveling, enjoying not inexpensive hobbies, dressing well, etc.

If your proposal included a true financial picture of each applicant for waiver of fees or some provision for catastrophic medical expenses, (not carried exclusively on the physician's back), I would be interested in supporting this idea.

I would also like to point out that caring for the Medicare population is often extremely demanding as many of these patients require extensive explanation and direction and compliance is still often poor.

Also, because of the long standing Medicare freeze, a two-tiered fee structure is necessary, forcing the general working and child rearing public to subsidize the Medicare recipients not only in the form of taxes but also in direct medical expenses.

Why has medicine been

Continued on page 268

In 1957, Sputnik became the first man-made earth satellite, the New York Giants moved to San Francisco and United Missouri opened its Investment Counsel Department.

United Missouri Bank announced Investment Counsel Services in '57. It didn't make national headlines. It did make a difference.

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Making a Difference

Missouri Physicians and the AMA

by Valerie A. Peters

The American Medical Association exists to benefit both the patient and the physician. But the AMA is only as good as the people who get involved.

The American Medical Association (AMA) was founded May 5, 1847 in Philadelphia, Pennsylvania by 250 physicians representing more than 40 medical societies and 28 colleges. Since that year, the membership has grown to more than 250,000 physicians. Then as now, physicians were concerned about the condition of medicine in the United States. The founding physicians saw the need for an organization of physicians that would provide leadership in the quest for better medical care. Because of their concern, the AMA was born.

The purposes of the AMA are to promote the science and art of medicine and betterment of public health. The organization exists to serve the physician as well as his or her patient. The AMA is recognized as the official spokesman for the medical profession and to this end, AMA leaders work diligently to pursue the interests of medicine. Each year, the AMA sponsors meetings all over the country and the organization also works with accrediting American medical schools, striving to constantly improve the quality of medical education in this country. One of the most important functions of the AMA is the initiation and support of sound legislation which the association believes can help to improve the quality of medical care.

Through the Missouri State Medical Association, members have the opportunity to get involved with the AMA. Physicians who are interested in becoming involved can become AMA delegates in their state association. Some doctors may decide to pursue a career with the AMA at its national headquarters. Either way, Missouri physicians have an open door to the AMA.

Profiled this month are three Missouri physicians who work closely with the AMA. Drs. George Bohigian, Harry Jonas and Melvin Kasten put forth considerable time and effort to help the AMA to advance the cause of the medical profession in the United States. It is a task none take lightly and all see as a unique and rewarding challenge.

George M. Bohigian, M.D.

"Too many doctors assume that specialty societies will speak for them, keeping their interests in mind," says George M. Bohigian, M.D., of St. Louis. "That practice ultimately splinters the groups and no one speaks for medicine in whole. The AMA does."

Dr. Bohigian, an ophthalmologist, is one of several Missouri physicians who presently work closely with the AMA. An AMA delegate from Missouri for the last eight years, Dr. Bohigian also serves as Chairman of the AMA Council on Scientific Affairs. He believes that the best way to further the causes of medicine is to get involved in organized medicine. Getting involved on the county and state level is the first step. Lending your time and effort to the AMA is the next and most important.

"I try to encourage physicians to get motivated in other organized groups than just organized medicine," Dr. Bohigian says, "but medicine is becoming more and more complex. Doctors should get involved, because in the long run, the AMA gives them the chance to get things done for their patients as well as the public health in more ways than one doctor can do on an individual basis."

A 1965 graduate of the St. Louis University Medical School, Dr. Bohigian practices what he preaches. Presently, he is a member of the American Academy of Ophthalmology and Otolaryngology, the Association for Research in Vision and Ophthalmology, Inc., Society of Military Ophthalmologists, and the American Medical Association, just to name a few. Presently, he is Chairman of the AMA delegation for MSMA.

Dr. Bohigian also serves the AMA as an active member. Besides serving as Chairman of the Council on Scientific Affairs, he is a member of the Committee on Professional Liability.

Dr. Bohigian explains his role as an AMA delegate in this way.

"I represent the Missouri State Medical Association and patients of Missouri to the AMA in the similar fashion that a representative goes to Congress," he says.

The way the AMA mechanism works, says Dr. Bohigian, is that if an individual has a concern, he or she can call the delegates directly or contact the local component medical society. The local component can then bring the issue to the MSMA annual meeting in resolution form and urge the MSMA to take some stand or urge the AMA to take action.

For example, at the 130th MSMA Annual Convention in Kansas City in March, Dr. Bohigian introduced a resolution asking the MSMA to urge the Council on Scientific Affairs of the AMA to develop an action plan and set recommendations for enhancing science education in secondary schools. Dr. Bohigian serves as chairman of the AMA Council on Scientific Affairs, which helps to set the biomedical research policy of the AMA.

The resolution was adopted and the matter will be taken to the AMA meeting in June for further action, showing how quickly the system can work.

"The AMA is very democratic in the way it works," Dr. Bohigian says. "It is very similar to the MSMA. In the AMA representation is approximately 60 percent representatives from the states, 30 percent specialty organizations and 10 percent students or residents."

As for the issues the AMA deals with, Dr. Bohigian says that about half of the issues deal directly with the issues of interest to patients. The rest are of interest to representative doctors and pertain to the "business" of medicine.

Dr. Bohigian says the hot issue presently deals with the Medicare requirements on regulation to have patients sign medically unnecessary services papers.

"The feeling is that this should be changed. So you need someone on the AMA level to talk to the powers that be," he says.

Many doctors don't get involved with organized medicine because of a general dislike of politics. According to Dr. Bohigian that is a mistake.

"The AMA is not a bunch of physicians putting the organization as their number one priority," he says. "Ultimately, the decisions made will be in the best interest of the patients.

"The AMA is dynamic. This is a worthwhile opportunity to serve my community and my profession and it keeps me abreast of what's happening. It's not just a job, it's a pleasure."

Dr. Bohigian takes pride in the work the AMA does and sees the potential of the organization.

"The reason I'm involved is that you can do a lot for your patients one on one. But you can do more for your patients, your profession and the public health through organized medicine." ■

Harry Jonas, M.D.

If you ever wondered what the dean of a medical school does when he is ready for a new challenge, Harry Jonas, M.D., can tell you. The former dean of the University of Missouri-Kansas City School of Medicine is now the Director of the Division of Undergraduate Medical Education with the American Medical Association (AMA) in Chicago, IL.

"After being dean for awhile, you find yourself wondering, 'Is there life after being a dean?'" Dr. Jonas says. For him there were several options.

"I could have continued in medical education or I could have focused on my specialty practice," he says. "This position is more of an extension of being a dean. Except now I'm looking at the whole system. That is what attracted me to the position."

Dr. Jonas has "sort of done it all as a physician." He graduated from the Washington University Medical School in 1952. He spent almost 20 years in Independence in obstetrics/gynecology practice. Then in 1975, he became the first chairman of the Ob-Gyn Department at UMKC School of Medicine. In 1978, he was named dean of the medical school. He retired as dean in June 1987 and began work with the AMA July 1, 1988. In 1987, Dr. Jonas also served as national president of the American College of Obstetrics and Gynecology (ACOG).

Although his present position is mainly an administrative one, Dr. Jonas is also in the process of getting a faculty appointment at one of the Chicago medical schools.

"I do miss the closer, more intimate contact with medical students that I had as a dean," he says. "My wife and I really enjoyed the students."

As Director of the Division of Undergraduate Medical Education, Dr. Jonas is responsible for all issues that deal with educational matters. He also serves as Secretary for the Liaison Committee on Medical Education (LCME). LCME is the national accrediting body for the United States and Canadian medical schools and is sponsored by both the AMA and the Association of American Medical Colleges (AAMC). One of Dr. Jonas' tasks on LCME is to put together the accrediting teams who go to all the medical schools. LCME does 20-25 surveys a year during the accrediting process.

In addition to his primary responsibilities, Dr. Jonas works with task forces searching for new ways to improve medical education. One task force in the AMA is looking into ways to identify behavioral or personality traits in people who apply to medical school, which will help predict performance. The reason being, to try to weed out those who simply go through the motions.

"Bad actors are a professional minority, but the few can give medicine a bad name," Dr. Jonas says. "We're looking for individuals who can fit the demanding role of a physician."

Dr. Jonas explains the many goals of his AMA position.

"My job is to help stimulate more academic participation in the AMA. There has always been good AMA participation by practicing physicians, but not always major interest in AMA by academic physicians, deans and faculty members," he says.

"One responsibility is to strengthen the Section on Medical Schools in the AMA and to help deans and faculty of the medical schools stimulate interest in the AMA."

One way the AMA hopes to stimulate new interest in the organization is through a new AMA program. The AMA Medical School Visitation Program makes it possible for a medical school to bring AMA representatives to the school to tell the story of the AMA, explain how the AMA can help the medical schools and how the medical schools can help the AMA. The AMA team listens to the questions raised by the schools and learns what they need from the AMA, then takes that information back to the AMA headquarters in Chicago for evaluation and action.

The AMA medical education department is currently involved in the issue of regulating residents' hours and supervision of residents. Says Dr. Jonas, "It is an educational issue as well as a patient care issue."

Dr. Jonas says that the best way to make the AMA work is for physicians to get involved. From the practicing physicians to the members of medical school faculties to the deans of the schools, participation is vital for the organization's success.

"There are exciting things happening on the national level every year with the AMA," he says. "Physicians need to get involved."

Dr. Jonas admits a bias toward getting involved with the AMA. He finds his work with the organization fascinating.

"The AMA office is an exciting place. I get a good perspective on what is happening in medicine and in medical education," he says.

"I think it's rewarding to be a part of the medical education system in the United States. Because I think it is the best system of educating medical students in the world," Dr. Jonas says with genuine pride.

"We have a challenge to keep pace with the rapidly changing faces of medicine," he says. "It is fun to be a part of all of it." ■

Melvin C. Kasten, M.D.

Trying to get other physicians involved in organized medicine is the most difficult job facing those working with the AMA, according to Melvin C. Kasten, M.D.

"That is definitely one of the hardest jobs there is," Dr. Kasten says, "because so many doctors take one issue that the AMA deals with, disagree with it, and then use that as their excuse not to join.

"I try to show them that the AMA is doing a lot for the physician — going to court and spending a million dollars in legal fees just to help the doctor. The AMA is much more active than most doctors may think."

Dr. Kasten, a general surgeon from Cape Girardeau, has been involved with the AMA since 1955. He became an AMA alternate delegate in 1975 and a delegate in 1978. Since becoming a delegate, Dr. Kasten has been involved with helping to recruit new AMA members by writing letters and showing physicians that the AMA does work for them.

Being involved in organized medicine isn't new to Dr. Kasten. Following his graduation from the University of Pittsburgh Medical School in 1955, Dr. Kasten joined the MSMA and the path he followed has been a busy one.

He echoes the statements of Dr. Bohigian when he explains that the AMA basically works like the MSMA. The only visible difference is the number of delegates.

"What we do with the AMA is the same sort of thing we do at the MSMA meeting," he says. "We go to reference committees, discuss the resolutions and then vote on them."

Asked if the job ever gets boring, Dr. Kasten laughs.

"No, I've really enjoyed it. Oh, maybe when a long-winded speaker gets up and you want to tell him to sit down, maybe then I might get bored," he says. "But for the most part, I enjoy it."

The work that Dr. Kasten does with the AMA is time-consuming, and although he says that the paperwork gets out of hand "most of the time," the work is rewarding.

"I would say that the most rewarding part of the job is seeing some of the things that start with the local and state medical societies make it at the national level," he says. "The grassroots level does get things done."

The fact that the grassroots level can make a difference, is one reason that Dr. Kasten believes in the work the AMA does. He says the AMA isn't just sitting around. Activity is the name of the game.

"The main issue in medicine right now is the Medically Unnecessary Services regulation of HCFA (Health Care Financing Administration) regarding Medicare patients," Dr. Kasten says. "They're denying office visits with no criteria. I have one (a patient) right now. Patients affected are very upset with HCFA."

Dr. Kasten says that patients aren't taking the regulations sitting down.

"My patient is writing letters to voice her concerns. They (HCFA) will listen to patients more than us (doctors)," he says. "That's why doctors must talk to their patients."

Dr. Kasten knows that you can't please all members of the medical community at any given time, but he says that the AMA works to see that all the groups have the chance to voice their concerns.

"All our organizations from the local level to the MSMA to the AMA are very democratic and majority rules," he says. "And that's the way it should be. Even if you don't agree with it." ■

UNIVERSITAS SANCTI LUDOVICI
RELIGIONI ET BONIS ARTIBUS
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School of Medicine

St. Louis University

Revamped with a new look, the St. Louis University School of Medicine faces the future with a flourish.

by Cindy Fischer

St. Louis University School of Medicine, as it is known today, was formed in 1903 when the Society of Jesus (the Jesuits) purchased the Marion Sims-Beaumont Medical College on the corner of Grand and Caroline in St. Louis.

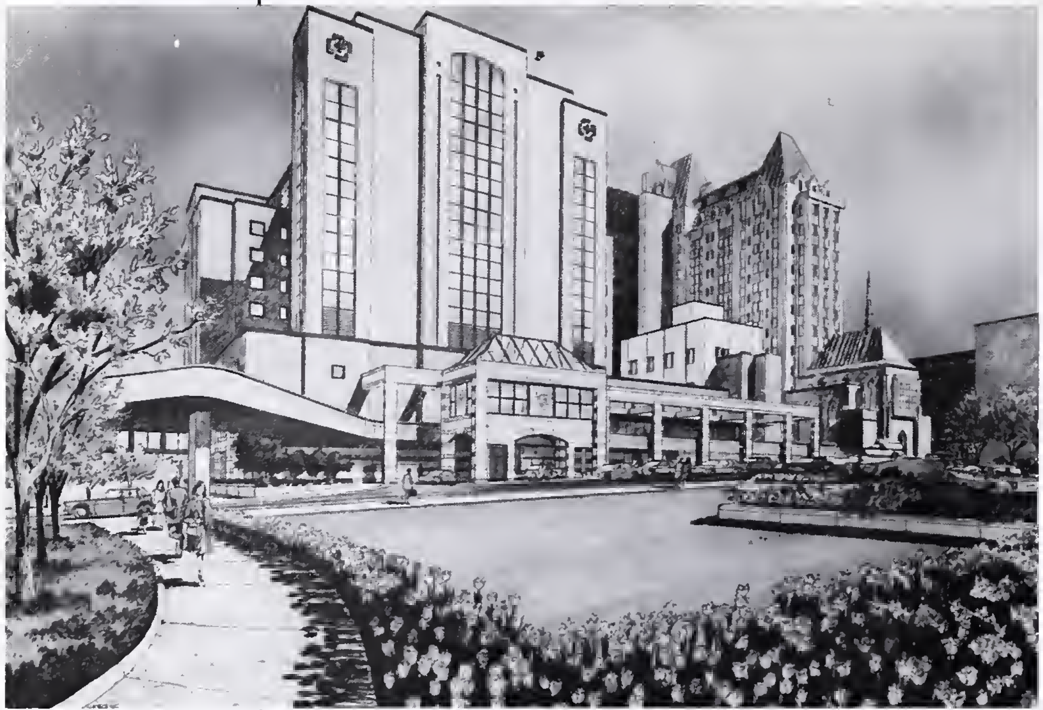
Academic medicine became a strong foundation of the School. Early chairmen and faculty members such as Edward A. Doisy Sr., Ph.D., Nobel Prize winner for isolating Vitamin K, and Henry Pinkerton, Ph.D., a renowned expert in the pathology of viral diseases, set precedents for a level of excellence in research and teaching that have always distinguished the School of Medicine.

A turning point for the School came in the 1930s in the midst of the Depression, when the University received a $1 million gift from the Firmin Desloge family to build a hospital immediately accessible to the School.

It is on this heritage that the School of Medicine flourishes today. The newly completed facade of The University Hospitals' $56 million replacement project illustrates the medical center's commitment to excellence in health care for its patients, physicians and students.

The new hospital provides eight additional operating rooms, an expanded outpatient surgery area, an enlarged emergency department and most important, all new inpatient beds. At the very top of the hospital are two floors dedicated to clinical and scientific medical research. Twenty-four laboratories fill each floor. These facilities will serve as the backdrop for future achievements of medical center faculty, staff, students and patients.

Each year 155 students are admitted to the freshmen class. They average in the 80th percentile on the Medical College Admissions Test (MCAT) and their average grade point is 3.6, one tenth higher than the national average admitted to medical school. The attrition rate is very low, with less than 1% failing compared to the



In this artist's rendering of the Medical Center's new look, the gothic roof of the old hospital can be seen on the right, while the new facility on the left sports a more contemporary style. Patients moved into the new facility in January 1988.

In the medical school's Clinical Simulations Lab, students have the opportunity to interview the "patient" (here an actress). Students are evaluated on their ability to correctly diagnose and their manner with the patient.

national average of 3%. And St. Louis University students perform above average on the National Boards. In fact, the entire class of 1988 passed Part I of the National Boards last year, setting a school record.

But students are selected for more than academic prowess. "Each year we tell our freshmen class that they are the best and the nicest that we can find," says Manuel R. Comas, M.D., associate dean. To ensure that students retain and develop their ability to interact with patients, communication courses are taught beginning with the freshmen year. Alberto Galofre, M.D., associate dean for curriculum, recently completed a study on St. Louis University students as residents. Residency program directors reported that these residents' greatest strength was their ability to communicate, a skill that the residents themselves believe they hold above the average resident.

In 1986, Arthur E. Baue, M.D., professor of surgery and associate dean for clinical affairs, became vice president for the medical center, replacing George E. Thoma, M.D., who had retired. As vice president, Dr. Baue seeks to promote an atmosphere that values the individual through teaching, research and the provision of health services. Whether it is caring for the ill and injured, educating those who will continue that caring or investigating new ways to prevent and cure illness and disease, the medical center's balance of knowledge, technology and care fosters excellence in all it does.

The medical center continues to achieve significant medical breakthroughs and accomplishments. In 1956, the first open heart surgery in the Midwest was performed here by C. Rollins Hanlon, M.D., now past-president of the American College of Surgeons. And in 1972, his successor and former student, Vallee L. Willman, M.D., performed the first heart transplant in St. Louis.

In 1986, the medical center was the site of both the first heart-lung transplant in the Midwest and St. Louis' first heterotopic transplant (in which a donor heart is connected to the original heart). In that same year, Donald Hasty set a world record: 91 days tethered to a Novacor heart assist device prior to receiving a transplant. The next year, a patient survived 75 days with the help of two Thoratec pericorporeal ventricular assist devices (VAD). His waiting period is the longest on record of anyone living on a double VAD before undergoing a successful heart transplant. Also in 1987, after several years of successfully using heart assist devices to prolong heart function while waiting for a donor heart, physicians implanted a Jarvik 7 artificial heart as a bridge to transplantation, making it the first time in Missouri that the device had been used.

Hearts are not the only vital organ in which significant transplantation research is being done at the medical center. Chief of the medical center's renal transplant services, Paul Garvin, M.D., has researched preservation techniques for the pancreas since 1980 and performed pancreas transplants since 1983. He is the only surgeon in Missouri doing this type of operation and he continues to seek ways to improve its success and help it become a viable and permanent cure for diabetes.

Cancer treatment at the medical center recently expanded with the development of William A. Knight III, M.D.'s bone marrow transplantation program. His work, which is funded by the Veterans Administration, has proved most successful in treating non-Hodgkins lymphomas. The division of oncology uses high dose chemotherapy with autologous bone marrow rescue and total body irradiation. It also conducts studies for solid tumors using a combination of drugs followed by marrow rescue. The division plans to begin allogeneic transplants for leukemia and other disorders such as aplastic anemia.

In 1983, long bone transplants became a viable option over the common alternative of amputation for patients with bone cancer. Orthopedic surgeon Michael McGuire, M.D. has performed hundreds of successful transplants and the department has maintained a well-supplied bone bank for this purpose. The procedure involves removing the cancerous portion of the bone and replacing that with cadaver bone which is surgically sized and attached to the existing bone. In about ten years, the cadaver bone is replaced by new bone.

The Center for Spinal Disorders is one of approximately a dozen spinal treatment facilities in the country. A joint program of Cardinal Glennon Children's Hospital and The University Hospital, the center treats scoliosis, kyphosis, spinal trauma, spinal tumors and degenerative disease of the spinal column. Persons with severe scoliosis may be candidates for a new form of spinal instrumentation that can be surgically implanted and provides excellent correction, virtually eliminating the need for a post-surgical brace, cast or extended bed rest.

Recently, the medical center was one of 25 centers nationwide chosen to participate in the Thrombolysis in Myocardial Infarction (TIMI) study, supported by a grant from the National Institutes of Health. The study investigates the best combination of treatments for heart attack victims. Tissue plasminogen activator (TPA), a powerful clot-dissolving drug, was assessed singly and in combination with another drug, Lopressor, that slows the heart rate and lowers blood pressure.

Within the medical center's department of psychiatry, the five-year-old division of behavioral medicine focuses on seven treatment areas which, in many cases assist clinical or surgical work of other departments. Among these are a sleep disorders center, a pain management program, an anxiety disorders center, a center for stress-related disorders, and a mental health program for women called FOCUS.

The department of psychiatry's geropsychiatry program treats a wide range of disorders in the older adult. The program's faculty are heavily involved in Alzheimer's Disease research and a newly-established brain bank provides the tissue needed to investigate the cause and possible cure of this disorder.

Medical students at St. Louis University rotate at the medical center and among affiliate hospitals including Bethesda General Hospital, Cardinal Glennon Children's Hospital, Deaconess Hospital, DePaul Health Center, St. John's Mercy Medical Center, St. Joseph Health Center, St. Mary's Health Center and the Veterans Administration Medical Center. These varied settings from an academic teaching and research center and a community hospital to a pediatric tertiary care institution and a government medical center, provide the physician of the 90s an extensive exposure from which to plan his or her area of service. ■

University o
Columbia

With a new commitment to research, educa
and patient care, the University of Missou
Columbia School of Medicine shows that ne
ground is ready to be broken.

University of Missouri Hospital and Clinics

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by Nancy P. O'Brien

It's a tale of two schools — one old, one new. One is steeped in tradition; started in 1841, it was the first publicly-supported medical school west of the Mississippi River. The other opened its doors as a four-year medical school in 1956.

There all difference ends, because the two are one. The School of Medicine at the University of Missouri-Columbia has come a long way since its early days of offering a two-year, basic-science medical program. Just three decades after becoming a four-year school, the institution shows what it can deliver to Missourians in terms of education, patient care and research.

With three emergency helicopters ready 24 hours a day, University Hospital had 934 helicopter transports for fiscal year 1986-87.

Photo credit: Darlene McGee/Academic Support

Elizabeth James, M.D., professor of child health and obstetrics and director of neonatal/perinatal medicine, visits babies in the 35-bed neonatal intensive-care unit.

Photo credit: Larry Boehm/Missouri Medical Review

Research grows steadily at the School of Medicine. Over the last five years, research funds awarded to the school have increased 15% annually. The school generates more than 40% of the campus' external-grant support and ranks No. 1 in research funding across the University of Missouri's four campuses.

But dollars tell only half the story. Medical breakthroughs and respect from colleagues tell the other part. Dr. Karl Nolph, director of the Division of Nephrology, is a case in point. Nolph has been a leader in developing and refining a new dialysis method, continuous ambulatory peritoneal dialysis (CAPD), which frees many kidney patients from having to use a conventional hemodialysis machine. Patients find cleansing their blood continuously with CAPD gives them more flexibility.

For eight years, Nolph has hosted an international conference on CAPD, and attendance in 1988 topped 1,000. He also maintains the National Institutes of Health's (NIH) national registry of CAPD patients.

The number of top foreign specialists who come to Columbia to learn the latest in kidney dialysis and the numerous requests that Nolph and his associates receive to give lectures around the world exemplify the school's prominence in dialysis, says Dr. John Maher, director of nephrology at Uniformed Services University of the Health Sciences in Bethesda, Md., and 1987 president of the International Peritoneal Dialysis Society. "At professional meetings, it is the opinions of Dr. Karl Nolph and his colleagues that are highly respected," he says.

In other breakthroughs, pediatric cardiologist Dr. Zuhdi Lababidi has pioneered a non-surgical technique used to unblock aortic obstructions in children and infants — most recently in a 2-pound, premature boy — and Dr. Richard Holmes, professor of nuclear medicine, has developed a radioactive drug, currently being tested, that allows physicians to do tomographic brain studies of their patients accurately, quickly and economically.

The faculty also leads in national studies. Researchers in the Department of Family and Community Medicine are principal investigators in Missouri of a five-year, $1.8 million collaborative study funded by NIH to determine the value of routine ultrasound tests for pregnant women. The schools of medicine at Harvard and Washington University and George Washington University Biostatistics Center are participating in the study.

Faculty members in the departments of Child Health, Medicine and Ophthalmology are co-investigators of a national, 10-year study funded by NIH to find the most effective way to treat insulin-dependent diabetics. Physicians evaluate patients for the trial, and the school's Cosmopolitan International Diabetes Center is the reference laboratory for biochemical measurements conducted during the project.

Carolyn Siebert, NIH's program director of the Diabetes Control and Complications Trial, says the school's diabetes investigators are leading participants in the study because of "their established expertise in diabetes research." Started in 1955, the School of Medicine's diabetes-care program is one of the oldest and largest in the nation.

School of Medicine faculty excel in basic as well as clinical research. Take, for example, the physiology department, which has focused its research for decades on cardiovascular physiology, particularly the development of coronary-artery disease and hypertension. In a survey published in the Chronicle of Higher Education, physiologists nationwide named the program among the best in the country in terms of overall strength and faculty quality.

Former department chairman, James O. Davis, MD, PhD, is a member of the National Academy of Sciences. The current chairman, Allan Jones, PhD, was the first University winner of a Method to Extend Research in Time, MERIT, award from NIH — a designation applied to only 5% of all NIH research proposals. The awards go to researchers with proven records of accomplishment, offering them up to 10 years of renewable support for their investigations.

"Dr. Jones is heading one of the best research laboratories in the country — it's among the top three dealing with cell-membrane abnormality in hypertensive animals," says renowned physiologist David Bohr, professor emeritus of physiology at the University of Michigan, past president of the American Physiological Society and past chairman of the American Heart Association's Council for High Blood Pressure.

A second department professor, Douglas Griggs, MD, received a MERIT award in 1987 for his study of angiogenesis, the growth of new blood vessels. He has developed new techniques for studying how ischemia stimulates development of coronary collateral vessels.

Research is enhanced by the school's location at the University of Missouri-Columbia. Mizzou was the sole public institution in the state — and one of only 45 in the country — ranked as a research university I, the highest classification given by the 1987 Carnegie Classification of Higher Education.

The University also is home to the largest research reactor on a U.S. college campus. The reactor supplies radioactive isotopes for medical research and cancer treatment.

Opportunities for collaborative interdisciplinary research abound on the campus, which features 19 schools and colleges, including engineering, veterinary medicine and agriculture. Only four other institutions in the nation can match the University in terms of the range of academic programs available on one campus. Taking advantage of this opportunity, faculty in the departments of Microbiology and Biochemistry collaborate with other University scientists to study mechanisms governing cell replication and differentiation in the Molecular Biology Program.

Excellent research and patient care go hand in hand, and that is nowhere more evident than in the field of trauma care.

Each year approximately 10,000 Missourians suffer major trauma resulting from falling, diving or vehicular accidents. Faculty members are nationally recognized leaders in spinal-cord- and head-injury prevention. Almost

Photo credit: Pat Nichols

Above, Karl Nolph, M.D., professor and director of the Division of Nephrology, second from right, attends a conference on continuous ambulatory peritoneal dialysis (CAPD), which he helped to develop. Below, Denise Johnson, M-4, of St. Louis, captured the national Dr. Richard Allen Williams Scholarship, which the Association of Black Cardiologists awards in recognition of academic excellence in cardiovascular medicine.

Photo credit: Ian Sights/Missouri Medical Review

100,000 Missouri high-school students have attended educational programs conducted by the Division of Neurosurgery's Head and Spinal Cord Injury Prevention Program.

Physicians from around the country have visited the school to learn how to set up similar programs in their states. In addition, the faculty has assisted Missouri cities wishing to start their own educational programs. Because of the program's success, the Surgeon General of the United States has established a national prevention program for head and spinal-cord injury and has appointed Dr. Clark Watts, director of the Division of Neurosurgery, as co-director.

To serve the people of the state, University Hospital and Clinics and the School of Medicine provide one of the most comprehensive major-trauma programs in the Midwest. The only Level 1 trauma center in central Missouri, University Hospital offers 24-hour comprehensive trauma care. Eight intensive-care units include neonatal, pediatric and burn intensive-care units.

Three emergency helicopters fly seriously-injured patients to the closest appropriate hospital. Once stabilized, patients can be transported to the University where they are cared for by a specially-trained, multidisciplinary team of physicians, nurses and other health professionals.

The faculty assists cities in Missouri and across the country in evaluating and improving their trauma care. University physicians have helped the American College of Surgeons establish national guidelines for designating which hospitals are trauma centers and have worked with legislators, hospitals and medical experts in Missouri to set up a statewide trauma system.

"We wouldn't have our excellent state program if it weren't for the University's outstanding trauma experts, their willingness to help other physicians or hospitals and their commitment to quality care," says Ken Cole, chief of emergency medical services for Missouri's Department of Health.

An integral component of the school's comprehensive trauma care is the Brain Injury Rehabilitation Program at Rusk Rehabilitation Center. Faculty in the departments of Neurology and Physical Medicine and Rehabilitation have developed new techniques for evaluating and monitoring brain-injured patients following their injury and during rehabilitation. Patients are taught how to cope with long-term residual effects of their injury and, through rehabilitation therapy and vocational training, are prepared to re-enter society.

Faculty expertise in patient care in the areas of perinatology and neonatology also has had a dramatic impact in central Missouri. High-risk-pregnancy specialists in the Department of Obstetrics and Gynecology travel to communities to help local doctors provide prenatal care and to identify pregnant women with complications who need specialized care at the University.

University Hospital is a major referral center for maternal and fetal medicine, and physicians around the state often request that patients with high-risk pregnancies be transported to University Hospital in the early stages of labor. At present, 85% of the women cared for by the school's obstetrical faculty have high-risk pregnancies.

In addition to research and patient care, the School of Medicine stresses quality education. For instance, the school maintains a large Department of Family and Community Medicine to better meet Missouri's needs for family physicians. With 31 full-time members, the department ranks among the country's largest and best. A higher percentage of the school's graduates enter family-medicine residency programs than the national average. The Robert Wood Johnson Foundation supports a fellowship program at the medical school for training physicians to serve as faculty in other family-medicine programs.

Students have excellent resources for learning outside the classroom as well. In the new J. Otto Lottes Health Sciences Library, students have immediate access to the latest medical literature through the National Library of Medicine's computerized databases. Faculty and staff in the library's computer-learning laboratory are developing new medical applications for computer technology, such as a videodisk that teaches reasoning and clinical-observation skills in simulated situations.

Students begin reaping the benefits of their quality education on residency-match day. Seventy-five percent of the school's graduates receive their first or second choice of residency-training programs, with 60% being matched with the program they want most.

By training accomplished physicians, expanding patient care and increasing research, the School of Medicine at the University of Missouri-Columbia is achieving its goal of serving the health-care needs of Missourians. ■

University of Missouri-Kansas City

Boasting the state's only six-year medical program, UMKC offers students a unique learning experience.

One of the nation's earliest six-year programs, UMKC offers an alternate pathway to a medical degree.

In the 17 years since the establishment of the combined baccalaureate-MD degree program in Kansas City, the School of Medicine's alternate-pathway approach to the practice of medicine for young Missourians just graduating from high school has received national attention and close scrutiny from educators.

One of the earliest of the nation's six-year programs, UMKC's education concept is especially attractive to the motivated high-achiever who shows early evidence of a health care commitment. Throughout the curriculum, the program strives to introduce and demonstrate to our students certain qualities inherent in the successful practice of medicine: compassion, sensitivity, honesty, integrity, dependability, responsibility.

Depicted in this issue of *Missouri Medicine* are six of Missouri's finest young people. Each of these student-scholars represents 99 other classmates in a particular class, from first-year students seeing patients as a member of a health care team in community hospitals, to sixth-year senior students completing their medical education in a variety of clinical, basic science, and humanities experiences.

Many of the recommendations of the GPEP Report — commissioned by the Association of American Medical Colleges in 1984 to determine strategies for the preparation and education of physicians for the 21st century — call for educational goals similar to those already incorporated in UMKC's academic plan. It is our pleasure to present to the readers of *Missouri Medicine* these six representatives of that plan and to share with you our pride in the accomplishments of all our students and graduates.

James J. Mongan, M.D.
Dean
UMKC School of Medicine

Scott Gard
Year 1
Age: 18
Hometown: Savannah, Mo.

Early contact with medicine, under the guidance of his docent, Dr. Arnolfo Sulit at Trinity-Lutheran Hospital, is one of the main reasons Scott likes the UMKC program. "It keeps you interested," he says. Here, Scott looks over some of Dr. Sulit's notes in a hospital conference room.

William Cooper
Year 2
Age: 20
Hometown: Hayti, Mo.

On his Year-2 OB/GYN rotation, William looks over a patient's chart. Still undecided on his specialty ("Possibly Cardiology"), William considers rotations such as this one, which combine clinical experience with classroom teaching, "the most enjoyable part of the program."

Kim Rozell
Year 3
Age: 21
Hometown: Branson, Mo.

In her weekly clinic session at Truman Medical Center (TMC), UMKC's primary affiliated hospital, Kim prepares to give an injection. Patient contact, she says, "is the best part. It gives you a chance to see what you learn in the classroom and then really apply it."

Mira Lee
Year 4
Age: 22
Hometown: Ballwin, Mo.

A one-month UMKC required preceptorship during their fourth year takes UMKC medical students into a rural setting to experience the practice of medicine away from a big-city hospital. Here, Mira assists Dr. Randall Huss with a patient in his Rolla, Mo. clinic.

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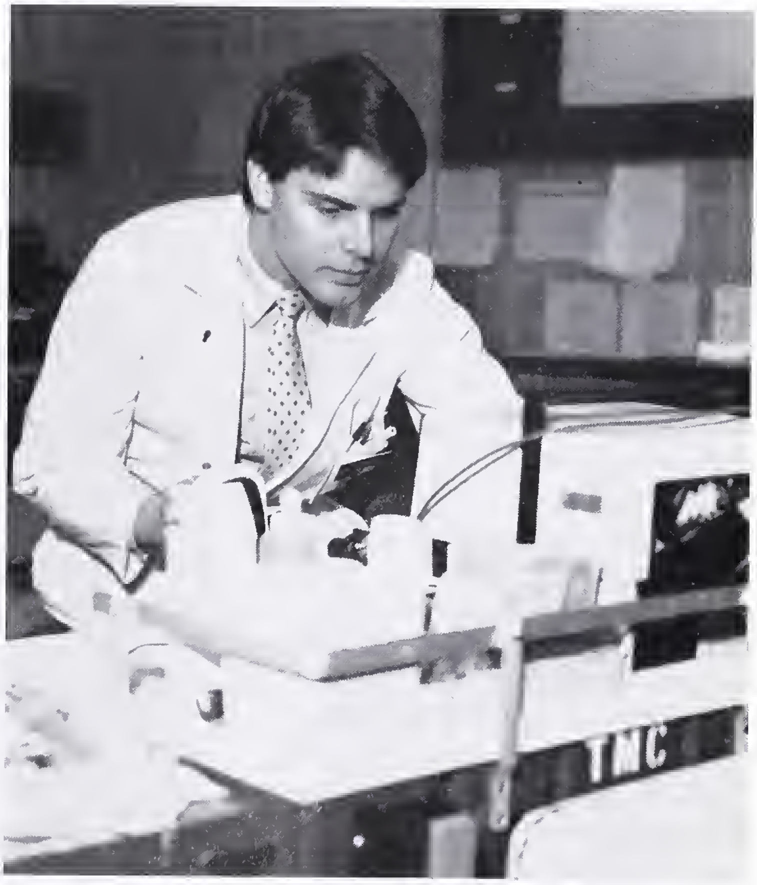
Patricia Allen
Year 5
Age: 23
Hometown: Kansas City, Mo.

Patricia scrubs for surgery on her rotation at Menorah Medical Center in Kansas City. Working with cardiothoracic surgeon Dr. Hamner Hannah during the two-month experience, she reports, is extremely stimulating. "Getting a chance to see and learn about open-heart surgery is quite thrilling."

Chip Zachary
Year 6
Age: 24
Hometown: Chillicothe, Mo.

In the trauma room at Truman Medical Center, Chip makes an adjustment on a crash cart. A senior student, he plans to begin his residency in Internal Medicine this summer at TMC.



Washington University

Bucking the national trend to raise the cost of a medical education, Washington University instead announced an unprecedented 5% reduction in tuition fees, showing the medical school's commitment to the medical student.

by Debra K. Bernardo
Coordinator of Medical News and Information

Formed in 1899, Washington University School of Medicine provided leadership in the early 1900s in shaping the system of clinical instruction provided by American medical schools, and remains today at the forefront of medical education and research.

Earlier this year, the School of Medicine announced an unprecedented 5% reduction in tuition for the 1988-89 academic year. The tuition decrease affects students in all four medical school classes, and will lower tuition to $13,400 from the current level, $14,100. The reduction was approved upon the recommendation of the Executive Faculty in hopes of relieving students of some of the financial burden incurred during their medical education.

Traditionally the School of Medicine's tuition charge has been well below the average tuition level of the other private U.S. schools of medicine. In ranking the tuition of the 52 private medical schools from the highest to lowest, Washington University ranked 31st in 1985-86, 32nd in 1986-87 and 39th for 1987-88. For 1986-87, tuition increased only 3% above the previous year, and no tuition increase was levied for the 1987-88 academic year.

The School of Medicine attracts students of exceptional quality. The 1987 entering class of 120 students was selected from a pool of 3,733 applicants; 92% of those who accepted had acceptances at one or more other U.S. medical schools.

The school's Medical Scientist Training Program is the largest in the country. One hundred-nine students are enrolled in the program, whose graduates receive both Doctor of Philosophy and Doctor of Medicine degrees in preparation for careers in academic medicine. Free tuition and a stipend for living expenses are provided for 47 of these students from federal funds and the remainder from school scholarship

This model of the Washington University School of Medicine shows the size and look of the School after completion of the new $14 million library. The new facility will triple the space of the old library and provide state-of-the-art computerized information management systems.

funds. The program recently received a $30 million endowment from the *Spencer T. and Ann W. Olin Foundation*.

Faculty, staff and alumni of Washington University School of Medicine have been awarded many honors, appointments and elections to professional offices. Fifteen Nobel laureates have been associated with the School of Medicine, and 16 faculty members have been elected to the National Academy of Sciences for their distinguished achievements in original research. Since 1979, no medical school has had more new National Academy of Sciences members than Washington University, with 10.

The School of Medicine's excellence in medical and scientific research extends to patient care, as one of the strongest tenets of the school is the clinical application of new knowledge.

Research at Washington University is supported in large part by the National Institutes of Health (NIH). The NIH provided more than $82.2 million in 1986 (latest figures available) for studies ranging from Alzheimer's disease, diabetes and cardiovascular diseases to nerve growth factor, brain imaging and blood clotting factors.

In total NIH support, Washington University School of Medicine ranked seventh among the top 20 medical schools in 1986. Of the several hundred research programs currently active at the medical school, 25 are NIH Program Project and Center Grants. Characteristically large and long-term, program project grants are awarded through an extremely competitive process that selects a recipient from the ranks of the best researchers, research programs or facilities nationwide.

Eight scientists at the School of Medicine have received MERIT status for their federal grants. MERIT (Method to Extend Research in Time) status recognizes scientific contributions by guaranteeing uninterrupted financial support without the time-consuming paperwork and other delays traditionally associated with grant renewal applications.

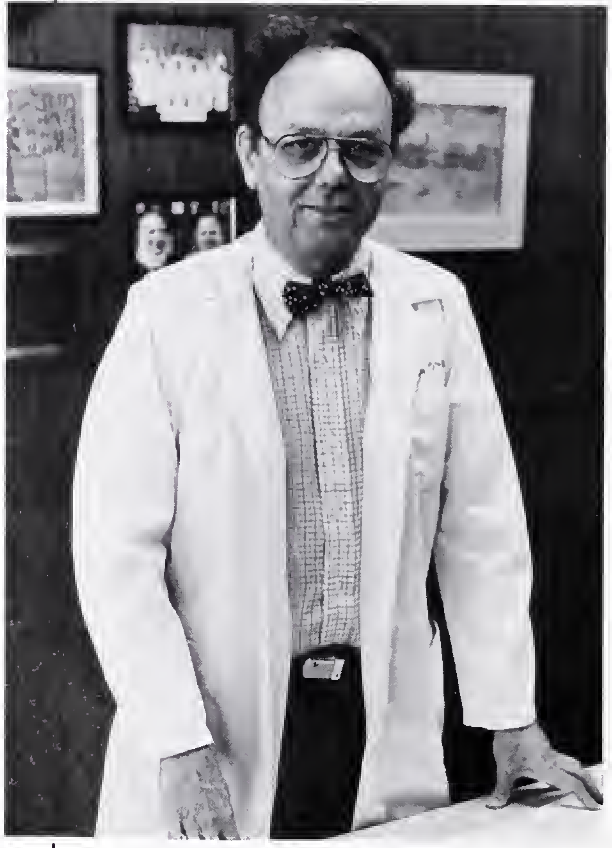
In the last year, the School of Medicine has established three new research centers — building on existing programs — to study AIDS, genetics and molecular biology.

The AIDS Clinical Studies Group will receive $5.5 million in NIH funding over the next five years to develop better AIDS treatment methods, conduct basic and clinical research, and improve public and physician education. The center — one of 17 nationally — includes a set of core laboratories with the latest diagnostic and prognostic techniques for evaluating AIDS patients and involves researchers from a variety of disciplines.

The Center for Genetics in Medicine, established through a $1.8 million grant from the *James S. McDonnell Foundation*, will take part in one of the most challenging projects in the biomedical sciences: complete analysis of the human genome. Work will be based on techniques developed at the School of Medicine to clone and then purify much larger unique fragments of human DNA than was previously possible. In addition, a special collaboration with RIKEN, Japan's Institute of Physical and Chemical Research, permits access to that Institute's advanced DNA sequencing facility.

Through a five-year, $12.1 million grant from the *Lucille P. Markey Charitable Trust* of Miami, the School of Medicine will establish the Markey Center for Research on the Molecular Biology of Human Disease. The center will support collaborative, interdisciplinary research projects in five principal areas: molecular basis of the immune response, structure and function of animal cells, molecular pharmacology, molecular genetics, and protein structure and function.

Above, Carl Frieden, Ph.D., directs the Medical Scientist Training Program (MSTP). Below, Emil R. Unanue, M.D., professor and head of pathology, was elected to the prestigious National Academy of Sciences in 1977.

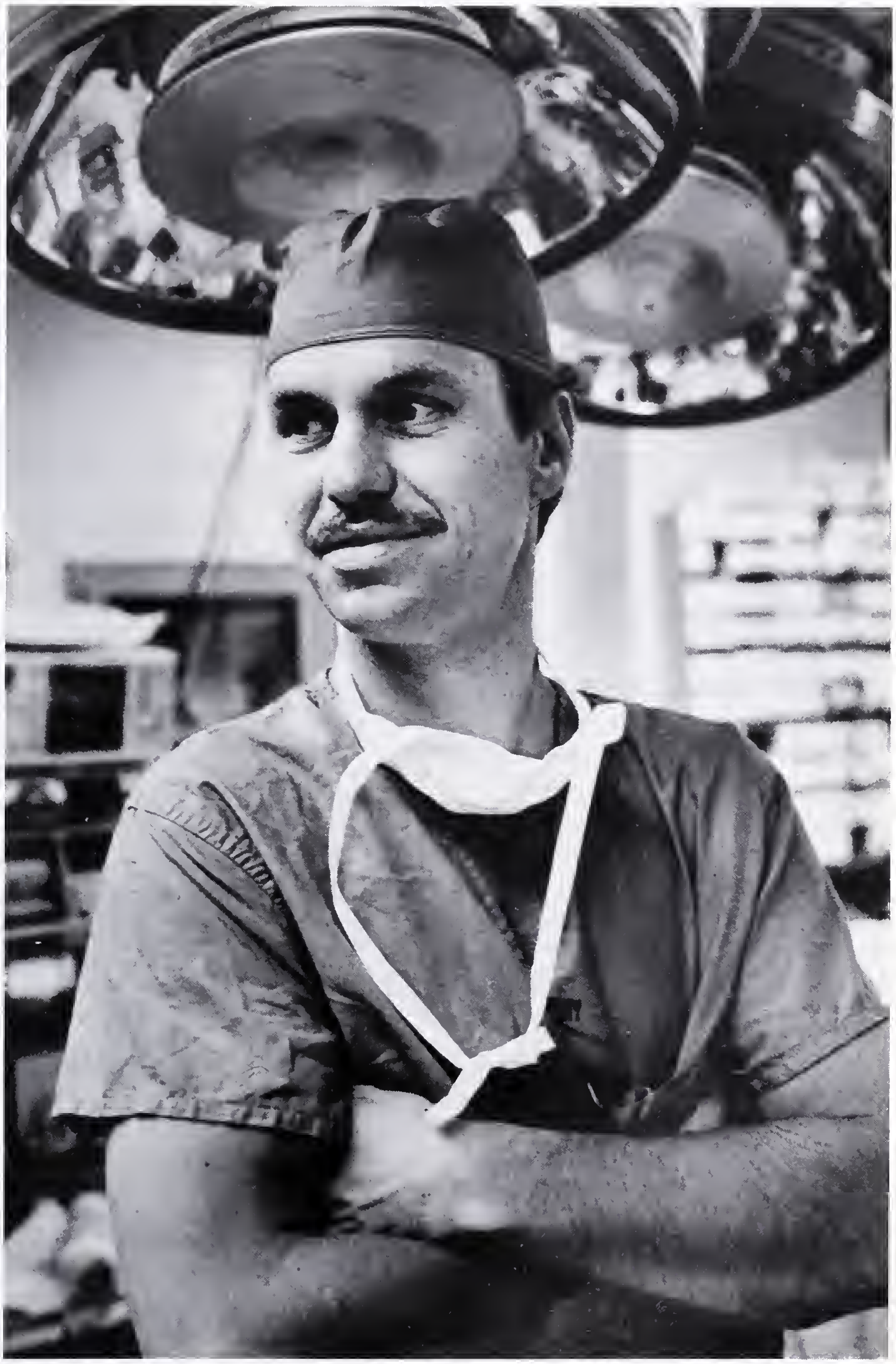


Organ transplantation — and research to develop surgical techniques and anti-rejection therapies — has become a strength of Washington University School of Medicine and Barnes Hospital, its largest teaching affiliate. The cardiac transplantation program, initiated in 1985, was approved for Medicare coverage last fall, a designation by which the federal government recognizes the high quality of the program. In addition to the cardiac program, the School of Medicine and Barnes Hospital have a long-standing commitment to the transplantation of other organs and tissues, including kidney, liver, heart-lung, cornea, bone marrow, long bones and pancreas islets.

The last five years have been marked by unprecedented expansion at the School of Medicine. Expenditures for renovations and new construction projects exceeded $98 million, and work space increased by 44%. This expansion includes the 10-story Clinical Sciences Research Building (CSRB), the East Building, and a network of pedestrian bridges connecting the medical school with its affiliate hospitals: Barnes, Jewish and Children's.

Construction is now underway on a $14 million medical library designed to become one of the most advanced biomedical information centers in America. The eight-level, 113,000-square-foot structure, scheduled for fall 1989 completion, will triple the space of the current library and provide state-of-the-art information management to support research, teaching and patient care.

That tradition — excellence in research, teaching and patient care — places Washington University at the heart of medicine in America. ■



R. Morton Bolman, M.D., associate professor of surgery, performs heart transplantations at Washington University's affiliate, Barnes Hospital. The School of Medicine has an extensive organ transplant program including transplantation of kidney, liver, heart, heart-lung, cornea, bone marrow, long bones and pancreas islets.

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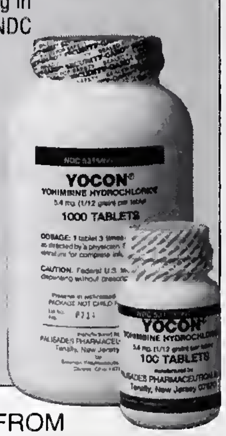
References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



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New Members

■ **George P. Ahlering, M.D.,** 621 S. New Ballas, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Ahlering received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1982. He completed his residency at St. John's Hospital, St. Louis, MO. Dr. Ahlering specializes in obstetrics/gynecology.

■ **Cris D. Barnthouse, M.D.,** Suite 628, 6700 Troost, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Barnthouse received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas in 1981. He completed his residency at the University of Kansas, Kansas City, MO. Dr. Barnthouse specializes in orthopaedic surgery.

■ **Barbara D. Bohon, M.D.,** Suite 302, 4400 Broadway, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Bohon received her preliminary education at the University of Kansas and obtained her medical degree at the University of Kansas Medical Center in 1982. She completed her residency at Truman Medical Center, Kansas City, MO. Dr. Bohon specializes in obstetrics/gynecology.

■ **Robert N. Buffaloe, M.D.,** 1505 Southwest Blvd., Jefferson City 65101, has become a member of the Cole County Medical Society. Dr. Buffaloe received his preliminary education at the University of Central Arkansas and obtained his medical degree at the University of Arkansas in 1980. He completed his residency at the Area Health Education Center Northwest, Berryville, AR. Dr. Buffaloe specializes in family practice.

■ **Peter J. Caruso, M.D.,** 2301 Holmes, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Caruso received his preliminary education at the University of Kansas and obtained his medical degree at the Universidad Autonoma De Guadalajara in 1983. He completed his residency at the University of California-Irvine Memorial Medical Center, Long Beach, CA. Dr. Caruso specializes in obstetrics/gynecology.

■ **Marco A. Castaneda, M.D.,** 1325 S. Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Castaneda received his preliminary education at Regis College and obtained his medical degree at the St. Louis University School of Medicine in 1975. He completed his residency at St. Louis University Medical Center, St. Louis, MO. Dr. Castaneda specializes in surgery.

■ **James W. Daly, M.D.,** N-617 Health Sciences Center, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Daly received his preliminary education at Santa Clara University and obtained his medical degree at the Stritch School of Medicine/Loyola University in 1955. He completed his residency at M.D. Anderson Hospital, Houston, TX. Dr. Daly specializes in obstetrics/gynecology.

■ **Gerald H. Dennis, II, M.D.,** 100 W. 31st Street, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Dennis received his preliminary education at Ohio State University and obtained his medical degree at Ohio State University College of Medicine in 1960. He completed his residency at Miami Valley Hospital, Dayton, Ohio. Dr. Dennis specializes in family practice/occupational health.

■ **Robert H. Finkle, M.D.,** 103 11th Street, Suite 2, Chillicothe 64601, has become a member of the Grand River County Medical Society. Dr. Finkle received his preliminary education at Kansas University and obtained his medical degree at the University of Kansas School of Medicine in 1954. He completed his residency at the University of Kansas Medical Center, Kansas City, Kansas. Dr. Finkle specializes in orthopaedic surgery.

■ **Lawrence L. Harms, M.D.,** 1513 E. Union, Moberly 65270, has become a member of the Chariton-Macon-Monroe-Randolph County Medical Society. Dr. Harms received his preliminary education at the University of Nebraska and obtained his medical degree at the University of Nebraska College of Medicine in 1982. He completed his residency at the AB Chandler Medical Center, Lexington, KY. Dr. Harms specializes in obstetrics/gynecology.

■ **Ralph A. Hicks, M.D.,** Children's Mercy Hospital, 24th & Gillham Road, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hicks received his preliminary education at the University of Louisville and obtained his medical degree at the University of Louisville in 1982. He completed his residency at Children's Mercy Hospital, Kansas City, MO. Dr. Hicks specializes in pediatrics.

■ **Gary W. Hinson, M.D.,** Menorah Medical Center, 4949 Rockhill Road, Kansas City 64110, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hinson received his preliminary education at the University of Illinois and obtained his medical degree at the University of Illinois School of Medicine in 1979. He completed his residency at the University of Texas, Parkland Hospital, Dallas, TX. Dr. Hinson specializes in diagnostic radiology.

■ **Joy A. Johnson, M.D.,** Suite 210, 6650 Troost, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Johnson received her preliminary education at the University of North Colorado and obtained her medical degree at the University of Colorado Medical School in 1978. She completed her residency at the University of Colorado Health Sciences Center, Denver, CO. Dr. Johnson specializes in radiology.

■ **Rex M. Joyce, M.D.,** 6420 Prospect, Suite 501-T, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Joyce received his preliminary education at Kansas State University and obtained his medical degree at the University of Kansas School of Medicine in 1982. He completed his residency at the Mayo Graduate School of Medicine, Rochester, MN. Dr. Joyce specializes in general surgery.

■ **Thomas K. Krummenacher, M.D.**, 10[illegible] S. Brentwood Blvd., St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Krummenacher received his preliminary education at Boston College and obtained his medical degree at the St. Louis University School of Medicine in 1978. He completed his residency at St. Louis University Hospitals, St. Louis, MO. Dr. Krummenacher specializes in ophthalmology.

■ **Charles K. Lee, M.D.**, Suite 500, 6700 Troost, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Lee received his preliminary education at Washburn University and obtained his medical degree at the University of Kansas School of Medicine in 1974. He completed his residency at Duke University Medical Center, Durham, NC. Dr. Lee specializes in cardiovascular and thoracic surgery.

■ **Jeffrey W. Martin, M.D.**, 12255 DePaul Dr., Suite 310, Bridgeton 63044, has become a member of the St. Louis Metropolitan Medical Society. Dr. Martin received his preliminary education at Ohio Wesleyan University and obtained his medical degree at Case Western Reserve University School of Medicine in 1981. He completed his residency at CWRU Hospitals, Cleveland, Ohio. Dr. Martin specializes in orthopaedic surgery.

■ **Sheila P. McMeekin, M.D.**, 2800 Main, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. McMeekin received her preliminary education at Emporia State University and obtained her medical degree at the University of Kansas School of Medicine in 1983. She completed her residency at the University of Kansas Medical Center, Kansas City, KS. Dr. McMeekin specializes in pathology.

■ **Gayle P. Miller, M.D.**, Suite 340, 2929 Baltimore, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Miller received her preliminary education at Purdue University and obtained her medical degree at the University of Kansas Medical School in 1980. She completed her residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Miller specializes in radiation therapy.

■ **Mark L. Pfautsch, D.O.**, P.O. Box 969, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Pfautsch received his preliminary education at Southeast Missouri State University and obtained his osteopathic degree at Kirksville College of Osteopathic Medicine in 1979. He completed his residency at Tripler Army Medical Center, Honolulu, HI. Dr. Pfautsch specializes in radiology.

■ **Vijay K. Sangar, M.D.**, One Hospital Drive, University of Missouri-Columbia, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Sangar received his preliminary education at the University of Kansas and obtained his medical degree at the Universidad Mundial Dominicane, Dominican Republic in 1984. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Sangar specializes in nuclear medicine.

■ **Jamie A. Scott, M.D.**, M173, One Hospital Drive, Dermatology Division, University of Missouri, Columbia 65212, has become a member of the Boone County Medical Societey. Dr. Scott received her preliminary education at the University of Missouri-Kansas City and obtained her medical degree at UMKC in 1984. She is completing her residency at the University of Missouri, Columbia, MO. Dr. Scott specializes in dermatology.

■ **Wendell J. Scott, M.D.**, Mason Institute of Ophthalmology, One Hospital Drive, University of Missouri, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Scott received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1983. He completed his residency at the University of Missouri, Columbia, MO. Dr. Scott specializes in ophthalmology.

■ **Allyn L. Sher, M.D.**, 500 Keene Street, Columbia 65201, has become a member of the Boone County Medical Society. Dr. Sher received his preliminary education at Brandeis University and obtained his medical degree at Boston University School of Medicine in 1982. He completed his residency at the University of Chicago Hospitals and Clinics, Chicago, IL. Dr. Sher specializes in neurology.

■ **Dennis M. Wilcox, M.D.**, 1509 W. Truman Road, Kansas City 64050, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Wilcox received his preliminary education at Wichita State University and obtained his medical degree at the University of Kansas School of Medicine in 1982. He completed his residency at Parkland Memorial Hospital, Dallas, TX. Dr. Wilcox specializes in diagnostic radiology.

■ **Susan M. Zurowski, M.D.**, M173 Health Sciences, One Hospital Drive, University of Missouri, Department of Dermatology, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Zurowski received her preliminary education at Knox College and obtained her medical degree at Rush Medical College in 1981. She is completing her residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Zurowski specializes in internal medicine/dermatology.

■ Student Members

St. Louis University

Todd Andrews

University of Missouri-Columbia

Joel D. Hassien

■ Letters to the Editor

Continued from page 242

isolated out to be so pressured? Surely no one has so harrassed the food or housing industries.

I am very disheartened to find a colleague, especially a leader, who wishes to add to the incredible burdens physicians have been bearing. I hope your views evolve into a more realistic approach, especially one which would spread about the burden of medical care for the elderly to the entire population if not to the individual.

Sincerely,
Joan M. Pernoud, M.D.
St. Louis, MO

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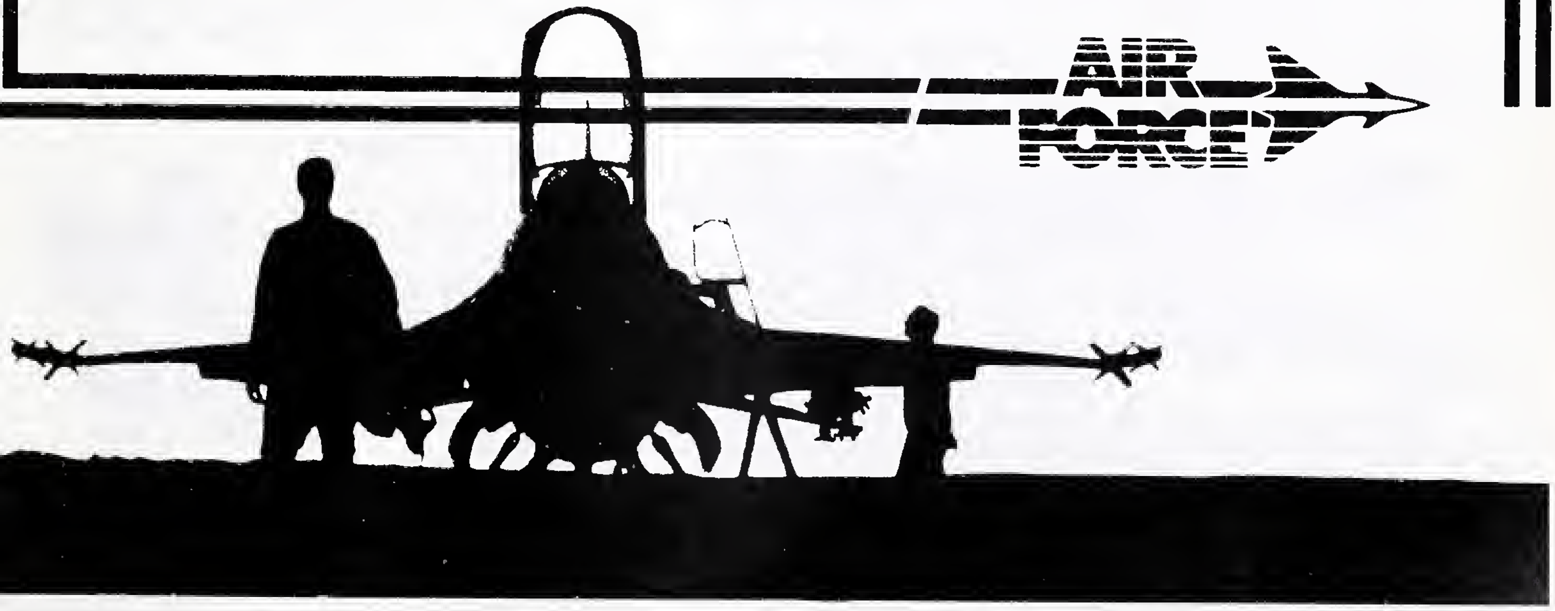

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In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

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References

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Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

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All material other than scientific should be received prior to the first of the month preceding month of publication.

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†See Warnings and Precautions.

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1. **Cardiac Conduction.** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
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PRECAUTIONS

General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Dermatological events (see ADVERSE REACTIONS section) may be transient and may disappear despite continued use of CARDIZEM. However, skin eruptions progressing to erythema multiforme and/or exfoliative dermatitis have also been infrequently reported. Should a dermatologic reaction persist, the drug should be discontinued.

Drug Interaction. *Due to the potential for additive effects, caution and careful titration are warranted in patients receiving CARDIZEM concomitantly with any agents known to affect cardiac contractility and/or conduction. (See WARNINGS.)*

Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

As with all drugs, care should be exercised when treating patients with multiple medications. CARDIZEM undergoes biotransformation by cytochrome P-450 mixed function oxidase. Coadministration of CARDIZEM with other agents which follow the same route of biotransformation may result in the competitive inhibition of metabolism. Dosages of similarly metabolized drugs, particularly those of low therapeutic ratio or in patients with renal and/or hepatic impairment, may require adjustment when starting or stopping concomitantly administered CARDIZEM to maintain optimum therapeutic blood levels.

Beta-blockers: *Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities.*

Administration of CARDIZEM (diltiazem hydrochloride) concomitantly with propranolol in five normal volunteers resulted in increased propranolol levels in all subjects and bioavailability of propranolol was increased approximately 50%. If combination therapy is initiated or withdrawn in conjunction with propranolol, an adjustment in the propranolol dose may be warranted. (See WARNINGS.)

Cimetidine: *A study in six healthy volunteers has shown a significant increase in peak diltiazem plasma levels (58%) and area-under-the-curve (53%) after a one-week course of cimetidine at 1,200 mg per day and diltiazem 60 mg per day. Ranitidine produced smaller, nonsignificant increases. The effect may be mediated by cimetidine's known inhibition of hepatic cytochrome P-450, the enzyme system probably responsible for the first-pass metabolism of diltiazem. Patients currently receiving diltiazem therapy should be carefully monitored for a change in pharmacological effect when initiating and discontinuing therapy with cimetidine. An adjustment in the diltiazem dose may be warranted.*

Digitalis: *Administration of CARDIZEM with digoxin in 24 healthy male subjects increased plasma digoxin concentrations approximately 20%. Another investigator found no increase in digoxin levels in 12 patients with coronary artery disease. Since there have been conflicting results regarding the effect of digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing CARDIZEM therapy to avoid possible over- or under-digitalization. (See WARNINGS.)*

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/ postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular: Angina, arrhythmia, AV block (first degree), AV block (second or third degree—see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.

Nervous System: Amnesia, depression, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.

Gastrointestinal: Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGDT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.

Dermatologic: Petechiae, pruritus, photosensitivity, urticaria.

Other: Amblyopia, CPK elevation, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. *Issued 6/87*

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Cardizem®
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☐ 120 mg

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References: 1. Schroeder JS. Mod Med 1982;50(Sept):94-116. **2.** Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39. **3.** O'Rourke RA: Am J Cardiol 1985;56:34H-40H. **4.** McCall D, Walsh RA, Frohlich ED, et al. Curr Probl Cardiol 1985;10(8):6-80. **5.** Frishman WH, Charlap S, Goldberger J, et al: Am J Cardiol 1985;56:41H-46H. **6.** Shapiro W: Consultant 1984;24(Dec):150-159. **7.** O'Hara MJ, Khurmi NS, Bowles MJ, et al: Am J Cardiol 1984;54:477-481. **8.** Strauss WE, McIntyre KM, Parisi AF, et al: Am J Cardiol 1982;49:560-566. **9.** Feldman RL, Pepine CJ, Whittle J, et al: Am J Cardiol 1982;49:554-559.

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Medical School News

University of Missouri-Kansas City

■ The School of Medicine had a respectable showing in this year's residency match, with 92% of the school's 83 participants being matched, a rate directly in line with the national matching rate. Of those 92%, 73% of the participants received their first or second choices. Internal medicine took the lead in specialty choices, with 29 students opting to pursue training in that field, followed by general surgery with 12 students, and eight students who will do a year of preliminary medicine, and six entering emergency medicine. Thirty-two of the participants will remain in Missouri: 17 in Kansas City, 13 in St. Louis, and two in Columbia.

■ **Dean James J. Mongan, M.D.,** who also is executive director of Truman Medical Center, recently announced a series of appointments as part of an administrative restructuring at the Medical School. **W. Kendall McNabney, M.D.,** professor and director of Trauma Services, is filling the newly-created position of assistant dean for clinical affairs. Dr. McNabney chairs the new Council for Clinical Affairs, which is composed of the 12 chairmen of clinical departments at Truman Medical Center, Children's Mercy Hospital, and Western Missouri Mental Health Center. **Stuart Munro, M.D.,** assistant professor of psychiatry, was appointed to the new position of assistant dean for Year 1-2, and two vice-chairmen positions were added to the Council on Evaluation, which were filled by **Kyle Petersen, Ph.D.,** professor of basic life sciences, and **William Robinson, M.D.,** associate professor and chairman of emergency health services. **Mr. Donald R. Smithburg** is fulfilling a three-fold role, as special assistant to the dean at the medical school, and as assistant executive director of Truman Medical Center and executive director of TMC's Charitable Foundation. Additionally, changes were made in existing Medical School Councils. **Dr. Robinson** and **Mark Steele, M.D.,** were named to the Council on Evaluation, and **Dev Maulik, M.D.,** and **Dipak Shah, M.D.,** were appointed to the Council on Curriculum.

■ The second annual meeting of the *Edward J. Twin, M.D., Memorial Society* on May 18 will feature keynote speaker **Edmund D. Pellegrino, M.D.** Dr. Pellegrino, who is director of the Kennedy Institute of Ethics and John Carroll Professor of Medicine and Medical Humanities at Georgetown University, will speak on, "Is Medical Ethics a Failed Ideal?" The Twin Society honors **Edward J. Twin, M.D.,** who was instrumental in establishing the UMKC School of Medicine and Truman Medical Center. A reception for the second annual meeting is planned for 6 p.m. May 18 in the Medical School; Dr. Pellegrino will speak at 7 p.m. For more information, call 816/276-1131.

■ **Marjorie Sirridge, M.D.,** professor and assistant dean for the Council on Curriculum, and **Reaner Shannon, Ph.D.,** associate professor of medicine, are participants in a campuswide effort to assess the outcome of undergraduate education, an important part of the University's 1982 long-range plan. Dr. Sirridge chairs the Chancellor's Committee on Academic Assessment, and Dr. Shannon is a committee member.

■ Three students are recipients of the scholarships from the St. Louis Friends of UMKC School of Medicine. **Gary Mund, Christy Casteel,** and **Kevin Borgerding** each received $750, awarded on the basis of academic merit and financial need.

■ The School of Medicine will celebrate its annual graduation May 27, with **Hugh Stephenson, M.D.,** interim dean of the University of Missouri-Columbia School of Medicine, as the annual *Carl Migliazzo Memorial Lecturer*. The Migliazzo Lecture traditionally is presented at noon on graduation day. This year, graduation ceremonies will be held at the Midland Theater in downtown Kansas City, MO.

The University of Missouri-Columbia

■ **Bonnie Bourne, Ph.D.,** assistant professor of continuing education, is co-directing a new statewide program to help nursing homes deal with the special needs of developmentally disabled adults. "More and more developmentally disabled adults require long-term care as they live longer, healthier lives, but nursing homes are not prepared for the unique needs of these residents," explains Dr. Bourne. A survey of care administrators indicates there is a misunderstanding of the needs of this special group of people, says Dr. Bourne. She hopes the new federally-funded program offered by the University of Missouri-Columbia and University of Missouri-Kansas City will clear up some misunderstandings care providers have about the developmentally disabled. The program will include workshops across the state for administrators of long-term care facilities. There will also be a specialist available to help individual nursing homes utilize the steps discussed in the workshops.

■ **Richard A. Finkelstein, Ph.D.,** Millsap Distinguished Professor and chairman of microbiology, presented "Bovine Lactogenic Immunity Against Cholera Toxin-Related Enterotoxins" and served as Co-Chairman for an open session on "Vaccine Strategies" at the International Congress for Infectious Diseases in Rio de Janeiro, Brazil last month. Earlier this year, Dr. Finkelstein presented results of a survey of graduate student stipends in microbiology departments in North American medical schools at the Annual Meeting of the Association of Medical School Microbiology Chairmen.

■ **Greg Flaker, M.D.,** associate professor of cardiology, is primary investigator of the University's participation in a nationwide study to determine if the medicine captopril can lessen the heart damage which often follows a major heart attack. The study is evaluating the value of the commonly-used high blood pressure medicine in reducing a person's chances of heart failure and death after a heart attack. Forty-one centers nationwide are participating in the four-year study.

■ **Grant Haven,** third-year medical student, presented details of a new national AIDS education project at the annual meeting of the American Medical Student Association in March. Grant is national project director of Students Teaching AIDS to Students (STATS). Through STATS, medical students nationwide are using education to help fight the spread of AIDS among America's teenagers. "Adolescents are at high risk for developing AIDS, and we want to help reduce this risk through education," explains Grant. The project curriculum developed at the University of Missouri-Columbia is designed to help medical students across the country teach the facts about AIDS to teens in schools, churches and youth organizations of their local communities.

■ **Paul E. Kaplan, M.D.,** professor and chairman of physical medicine and rehabilitation, has been installed as the new president of the Association of Academic Physiatrists. He will serve as president of the national professional organization for two years. Dr. Kaplan also participated in Hospital Satellite Network's (HSN) live, 90-minute teleconference on stroke rehabilitation, which was broadcast from San Diego in March. HSN is 24-hour health care network which broadcasts programs to health care professionals at more than one thousand hospitals nationwide.

■ **Joyce Mitchell, Ph.D.,** associate professor of child health and director of the information science group, and **Virginia Proud, M.D.,** assistant professor of child health, are directing an innovative computer training program for medical students at the University of Missouri-Columbia. The new program integrates computer training into required coursework for first-year medical students. Teaching students early how to search the medical literature will help them make the proper diagnoses and find the best treatments when they are practicing medicine, says Dr. Mitchell.

■ **Willis K. Paull, Ph.D.,** professor and chairman of anatomy, has received a continuation grant award of $77,055 from the National Institutes of Health for his study of "Neuroendocrinology of corticotropin releasing factor."

■ Ninety-two medical students participated in Match Day at the University of Missouri-Columbia this year. More than 75% of the students received either their first or second choice for a residency. The students will be going to more than 28 states for two to four years of specialty training. Twenty-one of the students are staying in Missouri for that training with nine going to St. Louis, four to Kansas City and one to Springfield.

■ The Mid-Continent Psychiatric Association, now dissolved, recently presented the $2,280 remaining in its treasury to the University's James L. Chapel Child Psychiatry Library. The library was established in 1984 to honor **James L. Chapel, M.D.,** emeritus professor and former chief of child psychiatry, who retired that year. Dr. Chapel, who died the following year, was a long-time member and officer of the Mid-Continent Psychiatric Association.

■ Plans for Mid-Missouri's first licensed adult day care center are closer to completion thanks to a $1,800 pledge from The Cosmopolitan Breakfast Club of Columbia. The Eldercare Center, sponsored by the School of Health Related Professions, will be located in Clark Hall on the University campus. Renovation of the former dormitory's lobby area has begun with completion scheduled for this fall. Future Eldercare Director **Lois Long, M.S.,** assistant professor of health related professions, says further community support will be essential to get the center operating. The new center will be designed to provide health and social services in a protective setting for those frail or impaired adults who cannot be left alone, yet can and want to live in their own homes.

Washington University

■ **Lawrence E. Fields, M.D.,** research associate in medicine at Washington University School of Medicine, has received a $120,000 grant from the Robert Wood Johnson Foundation.

The two-year grant is awarded through the foundation's Minority Medical Faculty Development Program and is the second he's received since being named one of the program's first fellows in 1983. The program provides up to four years of research funding to qualified physicians who choose to pursue full-time academic medicine careers.

Fields' research involves using molecular biology techniques to study the mechanics of gene regulation. He is looking specifically at regulation of the genes for lactate dehydrogenase, an enzyme that assists in the body's carbohydrate metabolism and that is expressed in different proportions in various tissues.

Fields received a bachelor's degree cum laude in biochemistry from Harvard University in 1976 and a medical degree from Harvard Medical School in 1980. He completed an internship, residency in internal medicine and research clinical fellowship in cardiovascular diseases at Barnes Hospital.

Fields is a diplomate of the American Board of Internal Medicine and the National Board of Medical Examiners, and a member of numerous other professional societies. He has received several honors and awards, including the Outstanding Young Men of America Award, the Department of Health and Human Services National Research Service Award and the National Medical Fellowships Inc. Kaiser Merit Award for academic excellence and leadership.

■ An internationally-recognized vascular pathologist delivered the second *Paul E. Lacy Lecture* March 17 at Washington University School of Medicine in St. Louis.

Ramzi Cotran, M.D., professor of pathology at Harvard Medical School and pathologist-in-chief at the Brigham and Women's Hospital, spoke on "A New Role for Endothelial Cells in Inflammation."

Cotran's early efforts added greatly to scientists' understanding of morphology, structure and function of various vessels. More recently, he and his associates have made contributions to the biochemistry and biology of cellular and soluble factors that affect the growth and adhesiveness of endothelial cells.

St. Louis University

■ St. Louis University Medical Center has been contracted as the nation's first heart transplantation "Center of Excellence" by Honeywell, Inc., according to John M. Burns, M.D., vice president, health and environmental resources for the Minneapolis-based company.

Dr. Burns said the medical center received the designation by meeting standards for Honeywell employees and others that "protect the patient from under service and the payer from over service." Honeywell, with 58,000 employees in the United States and 80,000 world-wide, produces control systems for homes and industry, including the aerospace industry.

To be designated a "Center of Excellence," the medical center demonstrated knowledge and results comparable to the field, and willingness to work with health care purchasers on specifications for transplantation in a managed health care environment.

Dr. Burns said five other medical centers across the nation may be similarly designated later this year.

D. Glenn Pennington, M.D., professor of surgery at the medical center, will be the physician in charge of cardiac transplants under the Honeywell designation.

St. Louis University Medical Center has been a heart transplant center since 1972, when surgeons here performed the first heart transplant in the midwest.

■ **Coy Dean Fitch, M.D.**, has been appointed chairman of the department of internal medicine and the first holder of the *Drefs Chair in Internal Medicine* at St. Louis University School of Medicine. The one million dollar endowed chair created by action of the board of trustees of the University, was funded by the estate of **Clara A. Drefs.** It will honor Mrs. Drefs and her husband, **Arthur G. Drefs,** who was president of the McQuay-Norris Manufacturing Co. and a leader in St. Louis industrial and civic affairs.

Dr. Fitch joined St. Louis University in 1969 as associate professor of internal medicine and biochemistry. He attained the rank of professor of internal medicine in 1973 and professor of biochemistry in 1976. From 1969 to 1976 he was head of the section of metabolism and from 1977 to 1985 was director of the division of endocrinology. He was appointed vice chairman of the department in 1983 and became acting chairman two years later.

Receiving his medical degree in 1958 from the University of Arkansas School of Medicine, Dr. Fitch served his internship and residency at the University of Arkansas. He is the author of more than 100 scientific publications. He has received research support from the U.S. Army, the Public Health Service, the World Health Organization and the U.S. Department of Agriculture.

■ The Orthopedic Research and Education Foundation has awarded **Joseph E. Noonan, M.D.,** a resident physician in the department of orthopedics at St. Louis University Medical Center, a one-year, $15,000 grant to study the hormonal regulation of bone remodeling.

The study concentrates on the proteins and enzymes that are related to the changes in bone skeletal physiology and pathology. The importance of this study is to gain a better understanding of bone remodeling in the treatment of disorders like osteoporosis and paget's disease.

Dr. Noonan is working on this study with the help of **Nicola Partridge, M.D.,** assistant professor of pediatrics; **Arnold Kahn, M.D.,** director of Pediatric Research Institute; **Joseph Puccinelli, M.D.,** graduate fellow in research; and **David Strege, M.D.,** resident in orthopedic surgery.

Dr. Noonan received his medical degree in 1984 from St. Louis University School of Medicine. He is in his third year of residency in general orthopedics. He plans to pursue a fellowship in a subspecialty of orthopedics after he completes his residency.

■ **Marilyn F. M. Johnston, M.D., Ph.D.,** associate professor of pathology at St. Louis University School of Medicine, has been awarded a grant of $85,752 from the Ortho Pharmaceutical Corporation to study the effectiveness and safety of recombinant DNA human erythropoietin (R-HUEPO), a hormone that stimulates bone marrow to produce red blood cells.

The synthetic hormone will be given to people who are anticipating surgery and planning to donate their own blood. Presurgical autologous blood donation solves many potential problems for the patient undergoing elective surgery, including blood cross-matching difficulties, shortages of available blood and the possibility of transfusion transmitted diseases.

Dr. Johnston received her medical degree in 1975 from St. Louis University School of Medicine. She earned her doctorate in biochemistry in 1970. She is a member of the American Association of Blood Banks and the American Society of Clincial Pathologists. Dr. Johnston joined St. Louis University in 1979.

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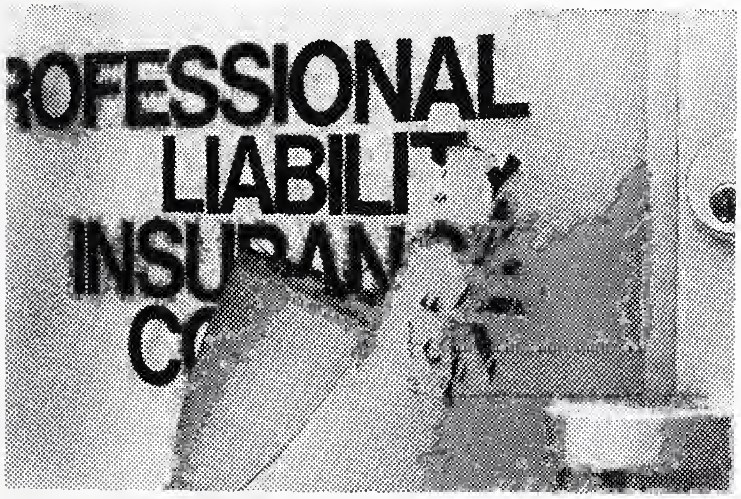

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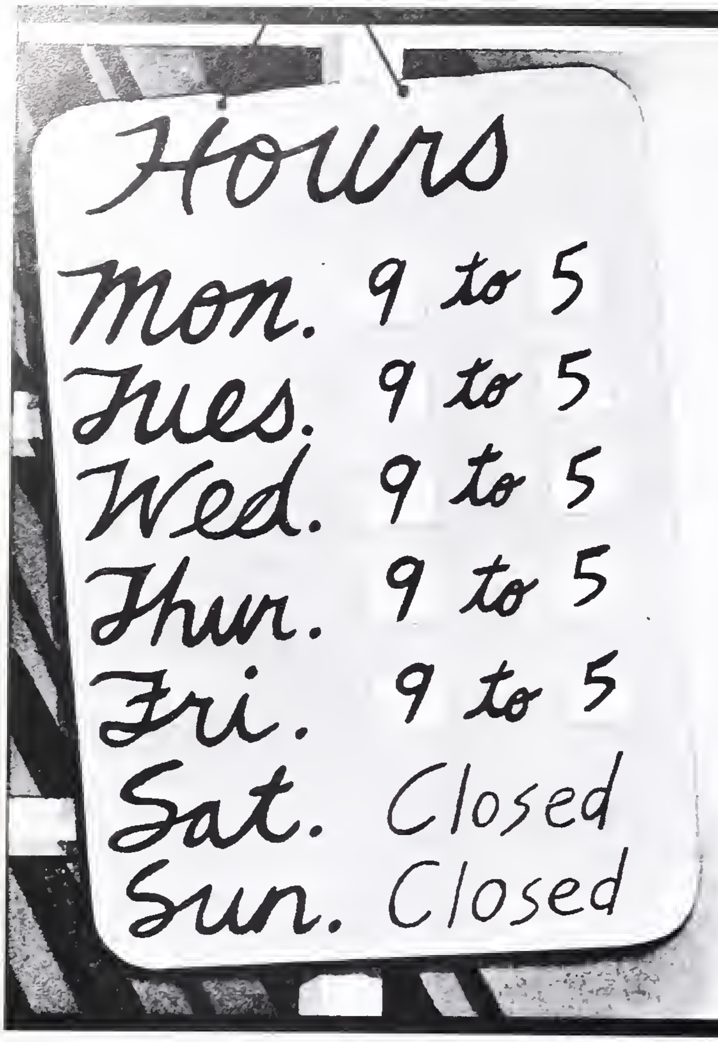

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Physician's Recognition Awards

Twenty-six MSMA members qualified for the MSMA-AMA Physician's Recognition Award during February 1988. The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

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Donald E. Heins, *St. Joseph*

Butler-Wayne-Ripley-Carter

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Karen Yates, *Cape Girardeau*

Clay-Platte

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Bruce E. Lerner, *Independence*
Ernest D. Szabados, *Independence*
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Pettis

James R. Farkas, *Sedalia*

SEMO

Alden P. Sargent, *Sikeston*

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Eleanor S. Abada, *St. Louis*
Robert V. Brennan, *Kirkwood*
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Devera M. Elcock-Skimming, *Chesterfield*
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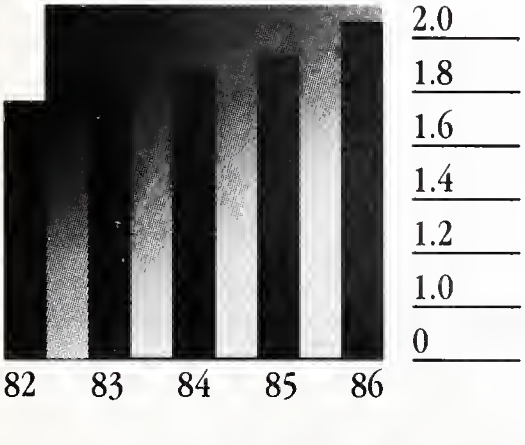

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In Memoriam

■ **Hollis N. Allen, M.D.,** died March 24, 1988 at the age of 88. Dr. Allen, a pathologist, was an internationally-known pioneer in the field of cholesterol studies. A longtime resident of Webster Groves, Dr. Allen was the first scientist to develop a test for blood coagulation. He received his undergraduate education at Bradley University and obtained his medical degree at the St. Louis University School of Medicine in 1926. He became associated with St. John's Hospital in St. Louis as a pathologist and as director of laboratories and held ties to the hospital for more than 40 years. Dr. Allen was a member of the St. Louis Metropolitan Medical Society.

■ **Urban J. Busiek, M.D.,** died March 4, 1988 at the age of 92. Dr. Busiek, a pediatrician, practiced medicine in Springfield for 64 years before retiring in 1984. Best known as the "pioneer pediatrician of the Ozarks," he was the first pediatrician in Springfield. He established his practice in 1920, and at that time, there was no one specializing in children's medicine within 150 miles of Springfield, according to an August 1985 issue of the Bulletin of the Greene County Medical Society. He received his bachelor's degree at Washington University in 1917 and obtained his medical degree at the Washington University School of Medicine in 1919. Dr. Busiek was a member of the Greene County Medical Society.

■ **Wesley E. Hayek, M.D.,** died March 23, 1988 at the age of 64. Dr. Hayek, a retired surgeon, earned his bachelor's degree in 1947 at Loras College in Dubuque, Iowa and obtained his medical degree in 1951 at Creighton University. He served in the Navy from 1944 to 1946. Dr. Hayek was a longtime staff member at Christian Hospital Northeast-Northwest, where at various times he was chief of staff at Northwest. He also served as chief of surgery from 1968 to 1971 at DePaul Health Center. Dr. Hayek was a member of the St. Louis Metropolitan Medical Society.

■ **C. Alan McAfee, M.D.,** died March 13, 1988 at the age of 73. Dr. McAfee, a surgeon, received his bachelor's degree from Washington University and obtained his medical degree at Washington University School of Medicine in 1942. In World War II, he served in the Navy and helped to set up base hospitals in the South Pacific. Dr. McAfee retired in 1983 after 14 years as chief of surgery at St. Luke's Hospital in Chesterfield. In 1983, he received the Washington University School of Medicine Alumni Award for career accomplishment. In 1985, the medical library at St. Luke's Hospital was renamed the C. Alan McAfee Library and a lecture was established in his name. Dr. McAfee was a member of the St. Louis Metropolitan Medical Society.

■ **Wellington B. Stewart, M.D.,** died March 16, 1988 at the age of 67. Dr. Stewart, a pathologist, practiced medicine in several areas of the United States before settling in Missouri. Following his undergraduate work at Notre Dame University, he obtained his medical degree at the University of Rochester in 1945. He worked as a pathologist at the Rockefeller Foundation then moved from there to Columbia University and Presbyterian Hospital in New York. In 1960, he became chairman of the pathology department at the University of Kentucky. In 1970 he came to the University of Missouri-Columbia as a professor of pathology and director of the UMC Medical Computer Center. From 1975 to 1986 he was director of the labs at UMC. Dr. Stewart was a member of the Boone County Medical Society.

■ **Thomas A. Von Lintel, M.D.,** died March 16, 1988 at the age of 40. Dr. Von Lintel, an anesthesiologist, served on the St. Luke's Hospital staff and was chairman of the anesthesiology department at Spelman Memorial Hospital. He received his bachelor's degree at the University of Kansas in 1970 and obtained his medical degree in 1974 at the Kansas University School of Medicine. Dr. Von Lintel was a member of the Metropolitan Medical Society of Greater Kansas City.

Missouri Department of

HEALTH

The Missouri Department of Health has developed and approved a survey to elicit input from the private medical community in conjunction with the Vaccine Delivery Task Force.

To assure fair representation of all areas, various sampling plans were discussed with a statistician. Based on his recommendation, the Department will mail the survey to all practicing full-time pediatricians, family practice specialists and general practitioners in Missouri.

The survey is expected to be mailed before May 1, 1988. If you have any questions or comments, send those to:

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Bureau of Immunization
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Phone: 314/751-6133

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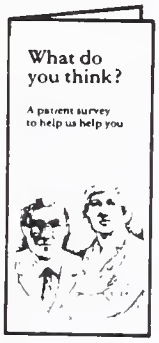
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BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE
There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED
CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other.

Issued 1/87

References:
1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
2. Korman MG, Hansky J, Merrett AC, et al: *Dig Dis Sci* 27:712-715, 1982.
3. Brandstaetter G, Kratochvil P: *Am J Med* 79 (suppl 2C):36-38, 1985.
4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986.
5. Lam SK, Hui WM, Lau WY, et al: *Gastroenterology* 92:1193-1201, 1987.

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Please see adjoining page for references and brief summary of prescribing information.

0825A8

ARMY RESERVE MEDICAL PROFILE NO.7

ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow, Massachusetts General Hospital, Boston, Massachusetts. Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude); Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neurosurgery Research Fellowship Training, National Institutes of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial Fellowship, National Masonic Medical Research Foundation; Albert Schweitzer Fellowship, International Albert Schweitzer Foundation; Harvard Medical School Cabot Prize for Best Senior Thesis; recently published article, "Who Shall Live and Who Shall Die" in Newsweek Magazine.

"The work I'm doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn't ask for a smoother transition. And that's true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

"Some of the projects the Army is undertaking are on the cutting edge of research. For example, I'm currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

"The quality of medicine and the caliber of people I've been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I'm giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General."

Find out more about the medical opportunities in the Army Reserve. Call toll free 1-800-USA-ARMY.

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Soldier being examined for effects of high-altitude cerebral edema.

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

May

9 **"Direct Digital Radiography"** — Location: Mallinckrodt Institute of Radiology, St. Louis. Contact: R. Gilbert Jost, M.D., Mallinckrodt Institute of Radiology, 510 S. Kingshighway Blvd., St. Louis, MO 63110. 314/362-7130.

11-12 **Current Management in Critical Care** — Location: Alameda Plaza Hotel, Kansas City, MO. Contact: Linda Smutz, Kansas City Southwest Clinical Society, 222 W. Gregory Blvd., Suite 323, Kansas City, MO 64114. 816/523-3383.

11-14 **"Refinements in Free Flap Surgery"** — Location: Waldorf-Astoria Hotel, New York City. Contact: Edward H. Withers, M.D., Plastic Surgery Educational Foundation, 444 E. Algonquin Road, Arlington Heights, IL 60005. 312/228-9900.

12-13 **Pediatric Advance Cardiac and Trauma Life Support Provider Course** — Location: Cardinal Glennon Children's Hospital, St. Louis. Contact: Virginia Engel, Nursing Service Administration, Cardinal Glennon Children's Hospital. 314/577-5657.

13-15 **"Emergency Room Legal Environment: Medicine's Response"** — Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, St. Louis University School of Medicine, CME Office, 1402 S. Grand, St. Louis, MO 63104.

19-21 **Progress in Clinical Pediatrics IV: Advances in Hematology and Oncology and Transplantation in Children: The State of the Art** — Location: St. Louis Children's Hospital at Washington University Medical Center, St. Louis, MO. Contact: Sharon Thiemann, CME Services, Children's Hospital, 400 South Kingshighway, St. Louis, MO 63110. 314/454-2231.

20-21 **"Update on Breast & Colon Cancer: A Multidisciplinary Approach"** — Location: Ellis Fischel State Cancer Center, Columbia. Contact: Jack Wax, Director Program Development, Ellis Fischel State Cancer Center, 115 Business Loop 70 West, Columbia, MO 65203. 1/800-392-2545 or 314/875-2100 ext. 297.

21 **"3rd Annual One-Day Anesthesia Conference"** — Location: Detrick Auditorium, Christian Hospital NE. Contact: Department of Anesthesiology, Christian Hospital NE-NW, 11133 Dunn Road, St. Louis, MO 63136. 314/355-2300, ext. 5022.

23-24 **"Advanced Trauma Life Support"** — Location: Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, CME Office, 42nd & Dewey Ave., Omaha, NE 68105-1065. 402-559-4152 (Please note: This CME program also held August 4-5 and October 27-28 in Omaha. Contact Ms. Hanssen for information.)

June

6 **"Sudden Infant Death Syndrome: To Monitor or Not"** — Location: Marriott Hotel, Omaha, NE. Contact: Cindy S. Hanssen, University of Nebraska Medical Center, CME Office, 42nd & Dewey Ave., Omaha, NE. 68105-1065. 402/559-4152.

9-10 **Patient Development** — Location: Stouffer Concourse Hotel, St. Louis. Contact: Barry Kling, University of Missouri-Columbia, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105

10-11 **"7th Annual Glennon Update Medical Genetics and Pediatric Cardiology"** — Location: Marriott Pavilion Hotel, St. Louis. Contact: Mary Hummert, Educational Coordinator, Room 202, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5638.

16-18 **AIDS and Infectious Disease Update** — Location: Hilton Resort, South Padre Island, Texas. Contact: Scott & White CME Office, 2401 South 31st St., Temple, TX 76508. 817/774-2350.

18-23 **Allergy: Back to the Basics in the Tetons** — Location: Jackson, WY. Contact: Missouri Postgraduate Course in Allergy, Inc., 24-26 S. Main St., Suite A, Liberty, MO 64068. 816/781-0902.

20-23 **1st International Symposium on Orbital Plastic Surgery** — Location: St. Francis Hotel, San Francisco. Contact: Plastic Surgery Educational Foundation, 444 E. Algonquin Road, Arlington Heights, IL 60005. 312/228-9900.

25-27 **Advanced Cardiac Life Support Provider Course** — Location: St. Louis University Medical Center, Learning Resources Center. Contact: Anita Herbst, CME coordinator, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

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Bactrim penetrates all tissues[1] to overpower most common susceptible uropathogens including *E. coli*, *Klebsiella* species, *Enterobacter* species, *Morganella morganii*, *Proteus (in vitro)* year after year.[2] B.i.d. dosing, easy transition from IV to oral, and economy help keep successful therapy within your power. Especially when you remember to protect your prescribing decision by specifying D.A.W.

Please note that *in vitro* data may not correlate with clinical experience. Bactrim is contraindicated in infants less than two months of age, in pregnancy at term, during lactation, and in documented megaloblastic anemia due to folate deficiency. Maintain adequate fluid intake.

Specify *"Dispense as written"*

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)

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Please see references and summary of product information on following page.

ROCHE®

Specify "Dispense as Written," "Do Not Substitute," or "Brand Necessary" according to your state regulations.

References: 1. Rubin RH, Swartz MN: *N Engl J Med 302*:426-432, Aug 21, 1980. **2.** BAC-DATA Medical Information Systems, Inc., Volume I, 1986.

Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

CONTRAINDICATIONS: Hypersensitivity to trimethoprim or sulfonamides; documented megaloblastic anemia due to folate deficiency; pregnancy at term and during the nursing period; infants less than two months of age

WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.

BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, arthralgia, cough, shortness of breath, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently.

BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS Clinical studies show that patients with group A ß-hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.

PRECAUTIONS: *General:* Give with caution to patients with impaired renal or hepatic function, possible folate deficiency (*e.g.*, elderly, chronic alcoholics, patients on anticonvulsants, with malabsorption syndrome, or in malnutrition states) and severe allergies or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur, frequently dose-related

Use in the Elderly: May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, *e.g.*, impaired kidney and/or liver function, concomitant use of other drugs Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) or a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported Make appropriate dosage adjustments for patients with impaired kidney function (see DOSAGE AND ADMINISTRATION).

Use in the Treatment of Pneumocystis Carinii Pneumonia in Patients with Acquired Immunodeficiency Syndrome (AIDS): AIDS patients may not tolerate or respond to Bactrim in same manner as non-AIDS patients. Incidence of side effects, particularly rash, fever, leukopenia, elevated aminotransferase (transaminase) values, with Bactrim in AIDS patients treated for *Pneumocystis carinii* pneumonia reported to be greatly increased compared with incidence normally associated with Bactrim in non-AIDS patients.

Information for Patients: Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.

Laboratory Tests: Perform complete blood counts frequently, if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function

Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time Bactrim may inhibit the hepatic metabolism of phenytoin Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations

Drug/Laboratory Test Interactions: Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffé alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.

Carcinogenesis, Mutagenesis, Impairment of Fertility Carcinogenesis: Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. *Mutagenesis* Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination, concentrations used exceeded blood levels of these compounds following therapy with Bactrim Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. *Impairment of Fertility* No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole

Pregnancy. Teratogenic Effects: Pregnancy Category C Trimethoprim and sulfamethoxazole may interfere with folic acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus Nonteratogenic Effects: See CONTRAINDICATIONS section

Nursing Mothers: See CONTRAINDICATIONS section.

Pediatric Use Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).

ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria) **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION)** *Hematologic:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. *Allergic Reactions:* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash Periarteritis nodosa and systemic lupus erythematosus have been reported *Gastrointestinal:* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. *Genitourinary* Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. *Neurologic:* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. *Psychiatric:* Hallucinations, depression, apathy, nervousness. *Endocrine.* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. *Respiratory:* Pulmonary infiltrates *Musculoskeletal:* Arthralgia, myalgia *Miscellaneous:* Weakness, fatigue, insomnia.

DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN: *Usual adult dosage* for urinary tract infections is one DS tablet, two tablets or four teaspoonfuls (20 ml) *b.i.d.* for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. *Recommended dosage for children* with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days Use identical daily dosage for 5 days for shigellosis. *Renal Impaired:* Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS: Usual adult dosage is one DS tablet, two tablets or four teasp. (20 ml) *b.i.d.* for 14 days

PNEUMOCYSTIS CARINII PNEUMONIA Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days See complete product information for suggested children's dosage table.

HOW SUPPLIED: *DS (double strength) Tablets* (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. *Tablets* (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Dose® packages of 100, Prescription Paks of 40. *Pediatric Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). *Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint)

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Phone: 314/636-2181

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1025 West Main Street
Flat River, MO 63601
Jane Hartrup, R.N.
Phone: 314/431-1947

Poplar Bluff
Butler County Health Department
1618 N. Main Street
Poplar Bluff, MO 63901
Vicky Sparkman, R.N.
Phone: 314/785-8478 or 8479

St. Louis
Magdala Foundation
4158 Lindell Blvd.
St. Louis, MO 63108
Gwen Whiteside
Phone: 314/652-6004

St. Louis City Division of Health
634 North Grand
St. Louis, MO 63178
Phone: 314/658-1054

St. Louis County Health Dept.
801 S. Brentwood Blvd.
Clayton, MO 63105
Phone: 314/854-6000

For more information, contact:
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Bureau of AIDS Prevention
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Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:
Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Prefilled Syringes: 300 mg./2 ml. in single-dose prefilled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

ADD-Vantage®* Vials: 300 mg./2 ml. in single-dose ADD-Vantage® Vials, in packages of 25.

Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40 °C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

* ADD-Vantage® is a trademark of Abbott Laboratories.

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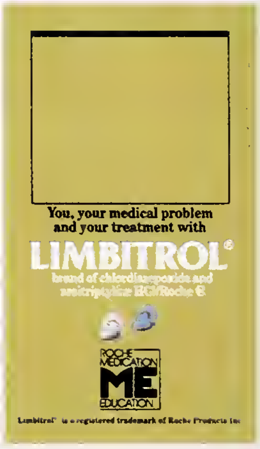
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- Possible side effects

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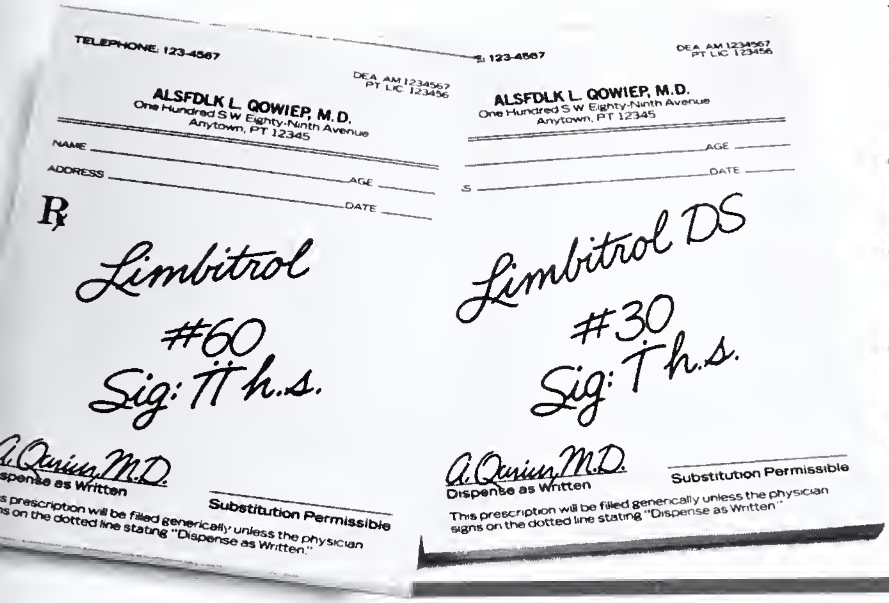
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]



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One Hundred S W Eighty-Ninth Avenue
Anytown, PT 12345

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#60
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Protect Your Prescribing Decision:
Specify "Do not substitute."

Limbitrol®
Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) (IV)

Limbitrol® DS
Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) (IV)

References: **1.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Feighner VP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

Limbitrol® (IV)
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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In the depressed and anxious patient

See Improvement In The First Week[1]...

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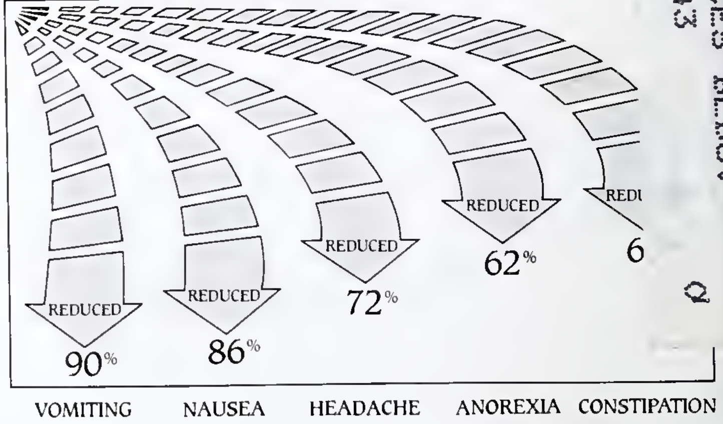
- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Percentage of Reduction in Individual Somatic Sym
During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓒ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓒ

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Missouri Medicine

Journal of the Missouri State Medical Association

June 1988

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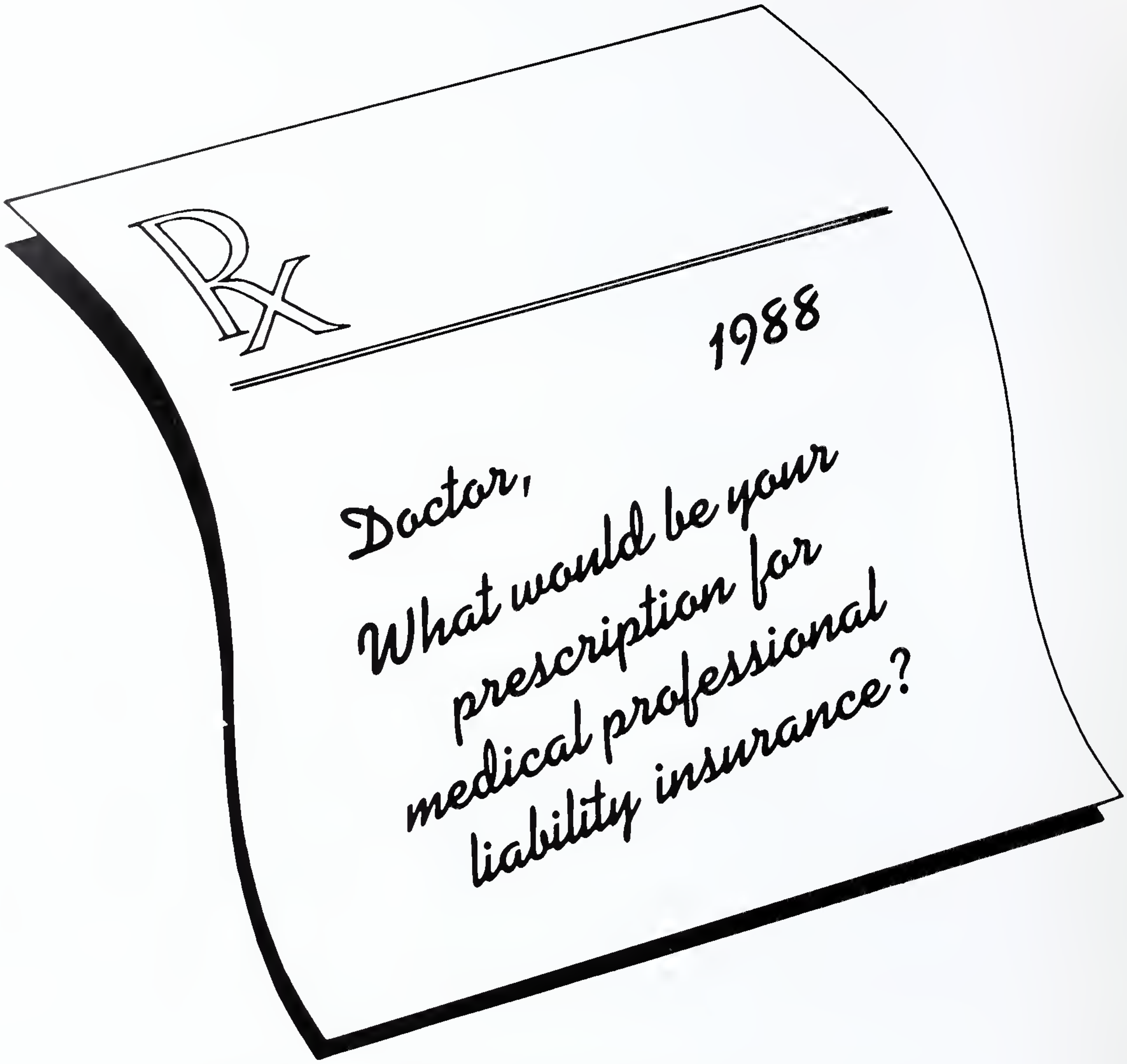
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Cover

"**Pastoral,**" 24" x 30" acrylic on board by **John O'Dell** of *St. Louis, MO.* This painting can be purchased directly from the artist but other works can be seen at the Cottonstone Gallery in Jefferson City and the Whittenberg Gallery in St. Louis.

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A NEW H_2 Antagonist
AXID®
300mg
nizatidine
Effective once-nightly duodenal ulcer therapy available in a
Unique Convenience Pak
for better patient compliance
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AXID
nizatidine
300 mg
Lilly
Axid, 300mg
Disp: CP
Sig: T caps.
Pak
AXID
NIZATIDINE
300 mg

AXID®

nizatidine capsules

Brief Summary. Consult the package insert for prescribing information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer In most patients, the ulcer will heal within four weeks

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h s after healing of an active duodenal ulcer The consequences of continuous therapy with Axid for longer than one year are not known

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists

Precautions: *General*—1 Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy

2 Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency

3 Pharmacokinetic studies in patients with hepatorenal syndrome have not been done Part of the dose of nizatidine is metabolized in the liver In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b i d , was administered concurrently

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus There are, however, no adequate and well-controlled studies in pregnant women It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats Pups reared by treated lactating rats had depressed growth rates Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use—Safety and effectiveness in children have not been established

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0 2%), urticaria (0 5% vs <0 01%), and somnolence (2 4% vs 1.3%) were significantly more common in the nizatidine group A variety of less common events was also reported, it was not possible to determine whether these were caused by nizatidine.

Axid® (nizatidine, Lilly)

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients All abnormalities were reversible after discontinuation of Axid

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients Rash and exfoliative dermatitis were also reported

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively PV 2091 AMP [041288]

Axid® (nizatidine, Lilly)

Lilly
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Indianapolis, Indiana
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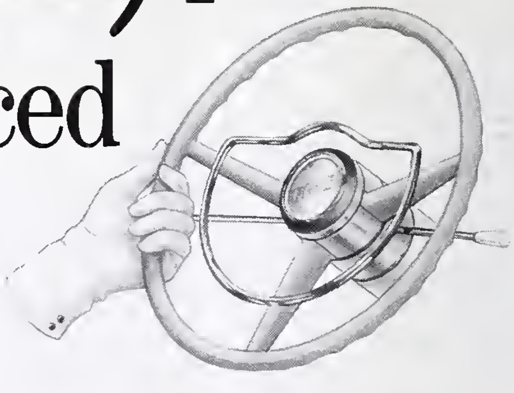

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Legislation wrap-up

In what could be termed a defensive year, medicine fared well in the recently completed Session of the Missouri General Assembly.

None of the several issues opposed by MSMA was adopted. In addition, the comprehensive AIDS bill followed medicine's guidelines by not mandating wide-spread testing for hospital admissions and marriage licenses.

On the positive side, some issues supported by MSMA were passed and now await the Governor's signature.

One of the biggest battles of the Session was the attempt to include physicians' offices within the definition of "hazardous waste" generators, thereby mandating these "small generators" to abide by strict regulations relating to the infectious waste that is truly generated in physicians' offices. Medicine was able to gain a "small generator" exemption from most of the strict regulations, but physicians will soon have to treat some infectious wastes in special ways to ensure safety to waste haulers and landfill operators. The Department of Health is expected to issue regulations dealing with "sharps" and highly infectious waste.

In other defensive moves, MSMA was able to derail efforts to curtail drug dispensing by physicians, prevent physicians from employing physical therapists and a move to give the Board of Pharmacy the power to establish "alternatives" to the existing generic drug substitution law. Also, the attempt by Registered Nurses to obtain "direct reimbursement" from Medicaid and insurance companies failed.

Some of the advantageous bills which did pass include those that will:

- Provide the Department of Health with powers to deal with the AIDS crisis while still protecting the individual rights of citizens.
- Ensure that Medicaid will continue to provide co-payments to eligible recipients who also receive Medicare.
- Require children attending pre-school to have the same immunizations as those attending school.
- Allow the Department of Health to provide funds for graduating senior medical students and residents to help pay off previous loans if those physicians agree to locate in an area of medical need. Currently, loans are available only during a medical student's school years.
- Require that patients with mental problems be placed in the least restrictive environment conditional upon the patient receiving prescribed outpatient care.

All MSMA members will be mailed a complete "Legislative Wrapup" in about a month. The Wrapup will provide a detailed listing of many of the bills considered by the Legislature this Session, MSMA's position, and the final fate of the bill. In addition, a forecast of issues for the next Legislative Session will be included. ■

May 2 *Missouri Register* update

This item was published in the May 2 *Missouri Register:*

- **Medicaid.** The Division of Medical Services (DMS) published an emergency order rescinding the amendment to the Medicaid Program Payment of Claims for Medicare Part B Services. The proposed amendment would have limited reimbursement of the Medicare Part B deductible and coinsurance for duly entitled individuals to only those covered services for which benefits also are allowable under the Medicaid program. The proposed amendment also would limit Medicaid reimbursement to the lesser of the Medicare or Medicaid limitations. DMS has withdrawn the rule on the recommendation of the Legislative Joint Committee on Administrative Rules following an April 27 hearing. The Committee believed more discussion time was needed.

MSMA objected to the change suggested by DMS because Medicaid patients with Medicare coverage would have to pay the deductible and co-insurance. The rescinded rule became effective May 9. ■

Wrongful life and birth cause of action

Here is a summary of the Supreme Court of Missouri's holding in *Wilson v. Kuenzi* concerning wrongful life and birth causes of action and the significance of it.

In the recent decision of *Wilson v. Kuenzi,* the Supreme Court of Missouri denied the existence of causes of action for wrongful life and wrongful birth. Wrongful life is a cause of action brought by a child or on behalf of a child who claims that he or she is damaged because had it not been for the negligence of the defendant, he or she would not have been born. Wrongful birth is a cause of action by one or both parents who allege that had it not been for the negligence of the defendant, their child would not have been born. Both of these causes of action were alleged by the plaintiff in *Wilson v. Kuenzi.*

The facts indicate that Barbara Wilson was 36 at the time of conception and age 37 at the time of the birth of Robert Wilson which occurred on June 23, 1983. Robert was born afflicted with Down's Syndrome. The court states the risk of such birth defect is approximately 1 in 1,000 for women in their twenties, and escalates to approximately 1 in 300 for a woman age 36.

It was not disputed that such a defect can be detected by a test known as amniocentesis, administered in the fourteenth week of pregnancy or thereafter, and that respondent doctor neither told appellants of the availability of such test nor counseled appellants regarding the chances of the baby being born with such birth defect by reason of appellant mother's age. Appellants alleged that the mother was denied the ability to make an informed decision to abort the pregnancy, which she alleged she would have done, had she been advised of the fact that the fetus was afflicted with the disorder.

The wrongful life action of the minor relied on the assumption that the mother would have aborted the fetus and that he would not have been born. Both causes of action alleged that it was negligence of the respondent doctor to fail to advise the appellant mother of the availability of the amniocentesis test, or to order such test, and to counsel her as to the results of the test so that she could make an informed decision as to whether or not to have an abortion.

Initially, the circuit court dismissed the claims based upon Section 188.130, RSMo. 1986. Section 188.130 prohibits such causes of an action in Missouri. On appeal to the Supreme Court, the Supreme Court affirmed the circuit court's decision but upon different grounds. The Supreme Court held that Section 188.130 could not be applied retroactively and therefore could not be applied in this case.[4] Robert Wilson was born June 23, 1983, approximately three years prior to Section 188.130's effective date of August 13, 1986.

With regards to the wrongful life action, the Supreme Court agreed with the majority of other states that damages are virtually impossible to ascertain. It recognized the "conceptual difficulties in the calculation of damages created by the perceived necessity of comparing impaired life with nonexistence." Thus, the Supreme Court prohibited the cause of action for wrongful life.

Concerning the claim of wrongful birth, the Supreme Court indicated that there was insufficient evidence of causation in order to hold a physician liable for a birth of the child. It noted that the "right to recovery is based solely on the woman testifying long after the fact and when it is in her financial interest to do so, that she would have chosen to abort if the physician had but told her of the amniocentesis test." Thus, according to the Supreme Court a more verifiable test would be necessary before recovery could be possible.

The Supreme Court further noted that its holding was compatible with the policy considerations of the Missouri General Assembly as evidenced through the legislature's attempt to limit the statute of limitations for malpractice actions, its limitation of malpractice recoveries and its initiation of tort reform in general.

Wilson v. Kuenzi was considered by the entire Supreme Court bench. Of the seven total Supreme Court judges, four judges concurred in the holding while three dissented. This split is significant in that in the event Section 188.130 is ever challenged, and found to be unconstitutional, the swing of one concurring judge to the dissent could create causes of action for wrongful life and birth. However, at present, Section 188.130 is intact and in force. Thus, causes of action for wrongful birth and life will be precluded by Section 188.130 and if necessary by *Wilson v. Kuenzi.* ■

Legal aspects of anatomical gifts

Over the past few years, advancements in medical techniques have raised legal questions. Now, legal information regarding organ and tissue donation has been made available through a Missouri Bar pamphlet, "Legal Aspects of Anatomical Gifts."

The text was prepared through The Missouri Bar's Health & Hospital Law Committee together with organ and tissue donation organizations throughout the state. Physicians may receive up to 100 copies of "Legal Aspects of Anatomical Gifts" free of charge by writing: The Missouri Bar, P.O. Box 119, Jefferson City, MO 65102. ■

Top medical graduates honored

Annually, MSMA awards $100 to the top graduates of Missouri's medical schools. Three students from each of the four medical schools are selected for their academic excellence throughout their medical education.

At their Honors and Awards Day Convocation on Friday, May 6, The University of Missouri-Columbia presented the MSMA Honors Graduate Awards to:

Steven P. Goetz
St. Louis, MO
Thomas N. Levin
St. Louis, MO
Robert J. McDonald
Rumson, NJ

On May 19, St. Louis University presented their MSMA awards to:

Gretchen Anne Meyer
St. Louis, MO
John B. Shapira
Surrey, British Columbia, Canada
Charlene Mary Zeisset, SSND
St. Louis, MO

Honored during the Senior Awards Program on May 20 at Washington University were:

Charles F. Chandler
Yuba City, CA
Andrew B. Landes
Boca Raton, FL
Jay C. Poorman
Portland, OR

During the May 27 commencement ceremonies at the University of Missouri-Kansas City, these graduates were honored:

Mark G. Griffin
Smithton, MO
Thomas R. McGinn
Foster City, CA
Paul E. Zachary, Jr.
Chillicothe, MO

Congratulations to all! ■

Your vote *does* count!

With the presidential election coming in November as well as state and local contests, it is important that you vote for the candidate of your choice.

Are you registered to vote? What about the eligible members of your family?

Any citizen of the United States who is a resident of Missouri and at least 18 years old may register. Individuals who are mentally incapacitated, incarcerated or on probation or parole do not have the right to vote.

To register, call your county election authority to determine the nearest location to register. Public libraries, the county clerk's office, school district offices, and city halls are some of the locations. You will complete a registration form with information on your identity, residence and qualifications. The form is signed and sworn to, then witnessed by an election authority.

You may register by mail by completing an application. However, you must state why you cannot register in person. Registration cards will be sent to you to complete and these must be notarized.

Whether you register in person or by mail, you will need either a driver's license or Social Security Card to prove your identity.

Be sure to register in time to vote! There are seven election dates in Missouri and you must be properly registered no later than the fourth Wednesday **prior** to an election. Here are our election dates:

- **Municipal election** — the first Tuesday in April annually.
- **Primary and general elections** — the first Tuesday after the first Monday in August and November in even numbered years.
- **Special school levy elections** — the first Tuesday after the first Monday in October.
- **Special elections** — the first Tuesday after the first Monday of February, March and June.

You may register any time the registration offices are open. In addition, you may register the first day you move to Missouri.

Voter registration is the responsibility of the boards of election commissioners in Clay, Jackson and St. Louis counties and the cities of Kansas City and St. Louis. The clerk of county commission serves as the election authority in all other counties. Check your local directory to contact the appropriate authority in your area.

One final note. Most members of the Missouri General Assembly have office computers listing the registered voters from their district. Make **your** voice heard and register today! ■

Are you supporting MMPAC?

During an election year your PAC is even more important. The elections are coming upon us and MMPAC needs your help.

Your contribution of $40 regular, $100 Sustaining or $250 SuperPAC will ensure that state and national candidates who support medicine's views will have a stronger chance of winning their election. You'll be interested to know that Missouri's Trial Attorneys have a $167,000 warchest to disburse through their PAC and have already distributed an additional $35,000!

Begin your involvement in the political process by contributing what you can to your PAC today. Medicine is counting on you.

Send your contributions to:
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Jefferson City, MO 65102

Video journals available

Through a company based in St. Louis, physicians may now subscribe to medical journals on videotape. Medical Video Productions offers bimonthly VHS tapes showing procedures and the latest information for orthopedics, ophthalmology, cardiology and obstetrics/gynecology. For more information contact: Cindy Bixler, Subscription Department, Medical Video Productions, 450 North New Ballas Road, Suite 205, St. Louis, MO 63141. 314/991-5510. ■

MSMA Medicaid Project

A recent Medicaid report by the Public Citizen Health Research Group called Missouri's Physician reimbursements "particularly stingy." Medicaid reimbursement in the state has deteriorated substantially since 1980 and such low payments create unwillingness among physicians to accept Medicaid patients.

Therefore, MSMA developed a physician survey to obtain timely and accurate information on the problems facing Missouri physicians who participate in the Medicaid program. This information will be presented to elected and appointed state officials, legislators, political candidates, policymakers and state agencies to influence public policy objectives regarding physician participation in Medicaid.

On May 2, 2,357 questionnaires were mailed to physicians selected from information provided by the State Center for Health Statistics, an agency within the Missouri Department of Health. Both M.D.s and D.O.s were included in the sample.

Results of the Missouri Medicaid Survey will become the exclusive property of MSMA. A preliminary report of results will be presented to MSMA on June 15, 1988. The final report and any desired publicity pertaining to it should be released by July 15, 1988.

MSMA encourages all those who received the questionnaire to return the completed document to MSMA's independent researchers. A first class return envelope was included with each questionnaire.

Most likely, Medicaid agencies and policymakers throughout the United States will want the results of this important survey. ■

A
MISSOURI STATE MEDICAL ASSOCIATION
insky
B
C

During the Annual Convention in March, MSMA President Larry G. Piepergerdes, M.D. presented the following state legislators plaques for their outstanding service to medicine. Pictured above, Dr. Piepergerdes honors: A) Rep. Mary Groves Bland (D-Kansas City); B) Sen. Henry Panethiere (D-Kansas City) and C) Rep. Jan Martinette (R-Grandview).

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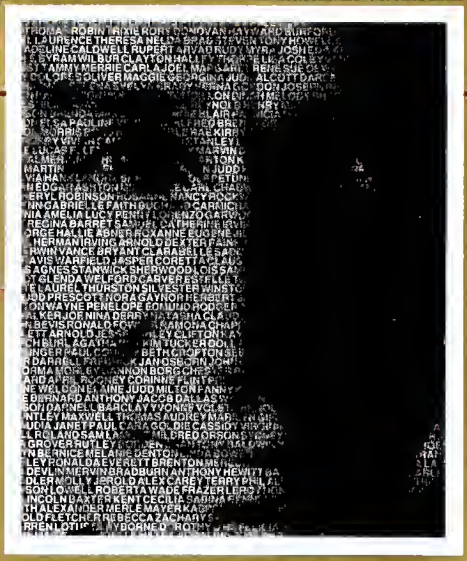

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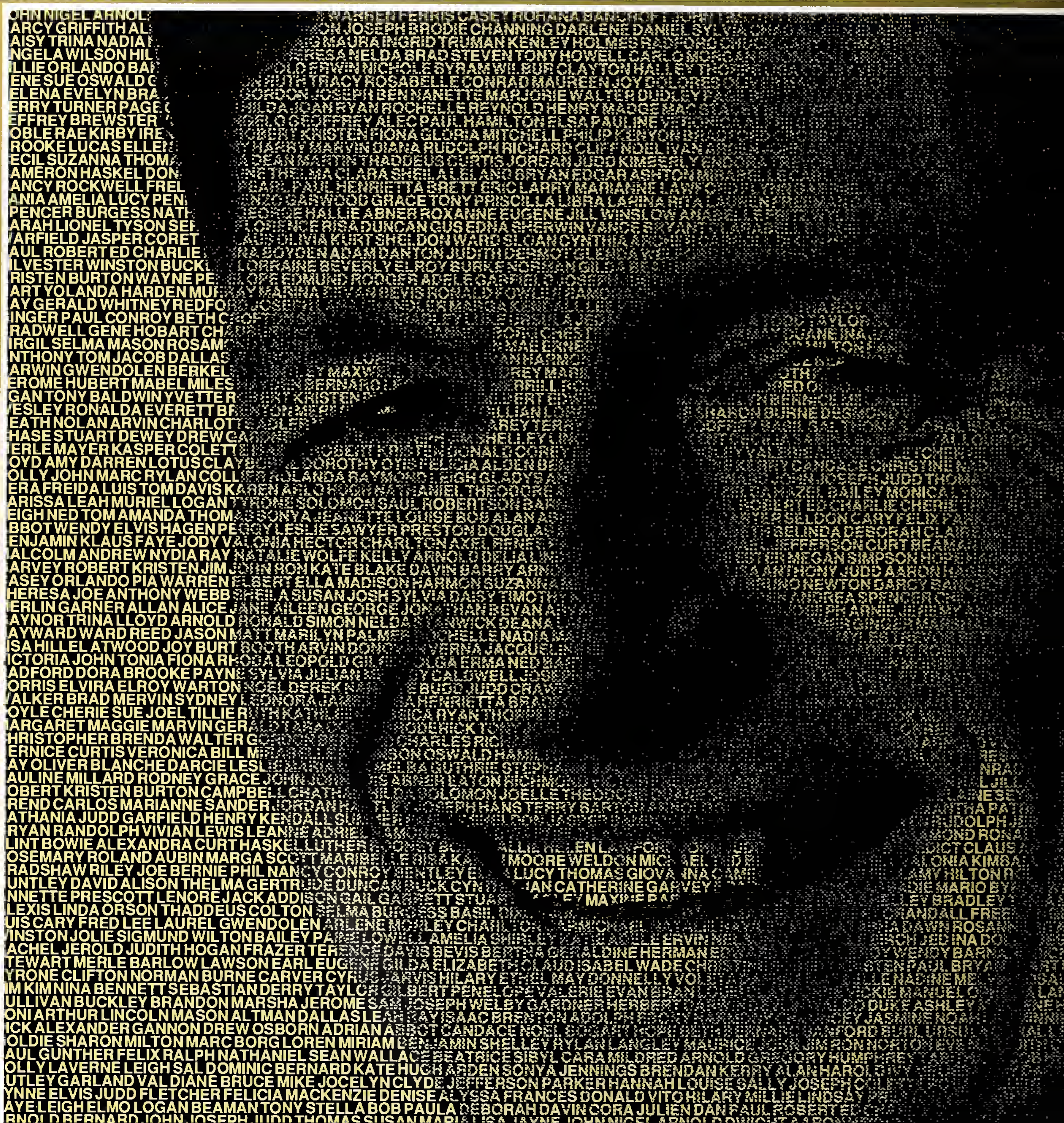
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GAN TONY BALDWIN YVETTE R
ESLEY RONALDA EVERETT BR
EATH NOLAN ARVIN CHARLOTT
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ERLE MAYER KASPER COLETT
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OLLY JOHN MARC RYLAN COLL
ERA FREIDA LUIS TOM DAVIS KA
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YNNE ELVIS JUDD FLETCHER FELICIA MACKENZIE DENISE ALYSSA FRANCES DONALD VITO HILARY MILLIE LINDSAY
AYE LEIGH ELMO LOGAN BEAMAN TONY STELLA BOB PAULA DEBORAH DAVIN CORA JULIEN DAN PAUL ROBERT

ON

...like the more than one million patients who have received INDERAL® LA.

In a recent survey, 4,120 participating physicians gave us their views[1] on INDERAL LA in the treatment of hypertension, angina and migraine.

INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated INDERAL LA good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe INDERAL LA.

INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with INDERAL LA to be as good as, or better than, other beta blockers.

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES
60,80,120,160 mg

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

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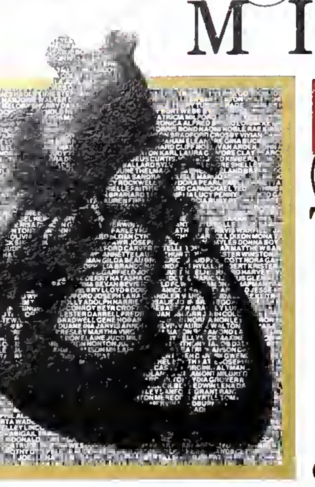

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl) LONG ACTING CAPSULES 60,80,120,160 mg

The one you know best keeps looking better

*
60 mg
80 mg
120 mg
160 mg

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefor abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroi ism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 a reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demar pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impair hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hyperte sive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be to that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart diseas elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as rese pine should be closely observed if INDERAL (propranolol HCl) is administered. The adde catecholamine-blocking action may produce an excessive reduction of resting sympathet nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attack or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calciur channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardi contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of beta blocker and verapamil has resulted in serious adverse reactions, especially in patients wi severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, *phenobarbitone*, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly wi propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasi blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in anima have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in bo rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-i duced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reprodu tive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in anim studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be use during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised whe INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rare required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotensio paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud typ

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitud weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hall cinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time an place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased perfo mance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dream appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constip tion, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching an sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, an Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the ski serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associate with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in sustained-release capsule for administration once daily. If patients are switched from INDERA Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERA INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessar especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL L once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg onc daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed f full hypertensive response to a given dosage is variable and may range from a few days to sever weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once dai dosage should be gradually increased at three- to seven-day intervals until optimal response obtained. Although individual patients may respond at any dosage level, the average optimal dosag appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 m per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (se WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once dai The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to s weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may b advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited t permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

D7295/188

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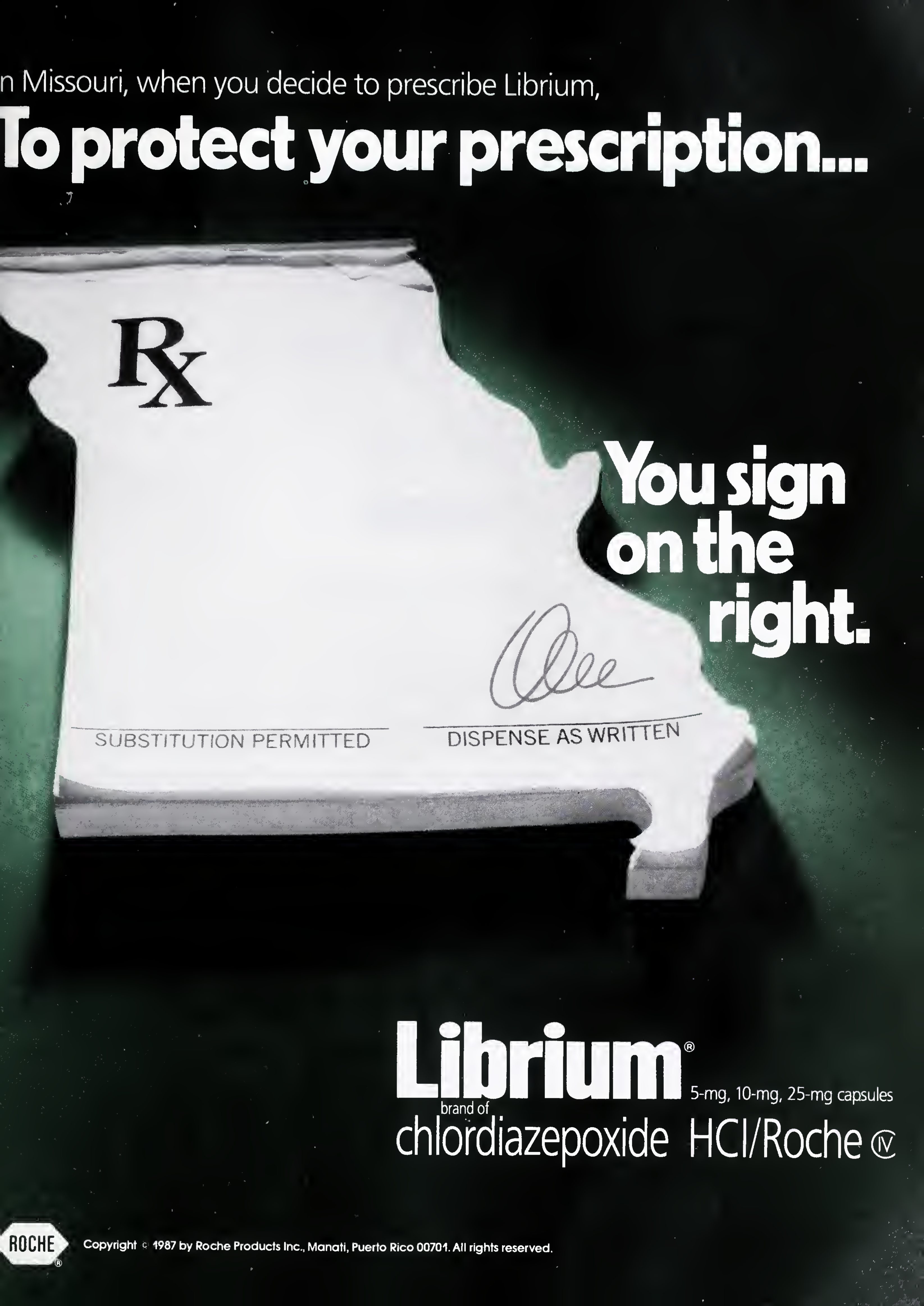

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All-Terrain Vehicles: Missouri Takes a Stand

by Valerie A. Peters

The battle over the regulation of all-terrain vehicle (ATV) use has been a long one. But thanks to new legislation, it may soon be over.

An increase of injuries caused by ATV use sparked the battle in the early 1980s. Experts estimate there are more than 2.5 million ATVs driven by 7 million people in this country. According to statistics, there have been more than 900 deaths and more than 335,000 injuries nationwide associated with ATVs since 1982. ATV-related injuries rose from 63,900 to 85,900 between 1984 and 1985 alone. Thirty percent of these accidents involved children ages 5-14. Most injured riders were thrown from the vehicle.

What is more alarming than the raw statistics, is that the majority of the injuries occur in the younger age brackets, not in adults. According to a University of Manitoba Health Sciences Centre study on ATVs and orthopedic injuries conducted in the Manitoba Province of Canada, most child victims of ATV accidents are between 11 and 15. The study found 375 hospitalizations of patients under 17 from accidents on ATVs, off-road and miniature motorcycles and snowmobiles between April 1979 and August 1986. Twenty-one children died.

Children under the age of 11 were also found to be injured on the ATVs. Of the 375 studied, 12 children five years old or younger were involved in the accidents and four of those were drivers. The most common cause of accidents in this study was loss of control.

In general, most injuries on ATVs occur either when the driver loses control, the vehicle rolls over and the driver is thrown, or the driver collides with a fixed obstacle such as a tree branch or a fence wire.

Missouri physicians have taken note of the increase in ATV-related injuries during the last few years. Michael H. Metzler, M.D., and Michael A. Greene, M.D., both surgeons at the University of Missouri-Columbia (UMC), observed the number of ATV injuries treated at UMC Hospital between January 1982 and March 1986. Drs. Metzler and Greene found that 32 patients were admitted to the hospital during that time for injuries incurred in recreational vehicle accidents. But, over the nine-month period from March 1986 through December 1986, 58 new patients were hospitalized and treated at the Hospital for ATV-related injuries. That number represents a ten-fold increase over the number of injuries found in the 50-month period of the original study.

The most common injuries are extremity injuries according to Dr. Metzler. But, he says, if you count the head and the neck as extremities, then almost all of the injuries are to the extremities.

"You have to consider the head an extremity," Dr. Metzler says.

***Comparison to Pinto Recall**

	Pinto	*ATV*
In use	1.8 million (recalled)	2.3 million
Accidents	38	>240,000
Deaths	27	>559

* *Table from U.S. Consumer Product Safety Commission.*

***Risk of Injury for ATVs Compared with Other Off-road Vehicles**

	Injuries†	*Hospitalizations†*
ATVs	45.2	6.0
Minibikes/ Trailbikes	23.8	1.59
Snowmobiles	12.7	0.79

† per 1000 vehicles

* *Table from U.S. Consumer Product Safety Commission.*

"In our particular study, the majority of what we saw was not torso trauma (chest and abdomen)."

When the first injury information became available, manufacturers voluntarily put age labels on the vehicles. Full-sized ATVs are not recommended for use by children under age 14. A 20-minute safety videotape at all dealerships in addition to a hang-tag on display models emphasizes the careful supervision of children operating the ATVs.

In January 1988, the federal government reached an agreement with ATV manufacturers to prohibit the sale of the three-wheel ATVs. In April 1988, U.S. district judge Gerhard Gesell gave final approval to the plan restricting off-road all-terrain vehicle sales. Under the terms of the plan approved by Gesell, manufacturers American Honda Motor Co. (the inventor of the all-terrain vehicles and the largest manufacturer), Yamaha Motor Corp., U.S. Suzuki Motor Corp., and Kawasaki Motors Corp., must stop selling three-wheel ATVs and buy back any still in dealer inventories. Safety advocates have charged that the balloon-tired three-wheel ATVs are prone to overturn, particularly when driven by children.

The companies may continue to sell four-wheel ATVs, but they are required to offer safety courses, place warning labels on their products and launch a major advertising campaign designed to teach ATV drivers, particularly children, how to avoid accidents.

Some experts speculate that ATV-related injuries may not decrease since there are still more than 2.5 million ATVs being used. In the meantime, Missouri legislators have taken a stand to protect this state's young ATV riders, and that action will likely save a large number of lives this year.

In April, the Missouri General Assembly passed a bill that allows the state to take measures to make riders of the ATVs safer. Governor John Ashcroft signed the bill into law, saying that the new law will provide "a cloak of protection and security" for the state's natural resources and ATV riders. Most sections of the law took effect immediately. Some of the provisions of the law include:

The injury of children is of great concern to those who make and sell ATVs.

- ATV riders under age 18 are required to wear helmets. No one under age 16 may ride the vehicles unless they are supervised by a parent or guardian or are operating the vehicle on private property.
- Off-road vehicles may be operated only in waterways on private property where the landowner has given permission for the vehicle to be in the water.
- ATVs cannot be operated on roads or highways unless the driver has a special permit.
- Every ATV in the state must be registered as a motor vehicle with the Department of Revenue. The registration is good for three years and costs $10.
- No one may ride on an ATV as a passenger unless the vehicle is being used in farming.
- No person may operate an ATV while under the influence of alcohol. Leaving the scene of an ATV accident is a crime.

ATVs include the three-wheel ATVs, four-wheel ATVs, mini motorcycles, snowmobiles, dirt bikes, dune buggies, motorcycles, Jeep-like vehicles and four-wheel drive trucks. The ATVs are for use in sand, mud and other surfaces in all kinds of weather and can reach speeds of up to 50 mph. Although the three and four-wheel ATVs have received the most attention, all off-road vehicles pose a danger to those who use them irresponsibly.

Missouri may be only one of many states to follow a national trend in passing ATV legislation. Attorney General William Webster has predicted that at least 20 states will tackle the issue this year.

Rep. W. T. Dawson, an Independence Democrat and House sponsor of the bill, said that although the bill wasn't perfect, it is a step in the right direction. Sen. Edwin Dirck, a St. Louis County Democrat who handled the bill in the Senate, said the bill would save Missouri's most important natural resource — children and most physicians would agree.

The American Academy of Pediatrics has issued statements voicing its support of legislation which would restrict the use of the all-terrain vehicles. The Academy has expressed concern that even though the new laws will stop the sale of new three-wheel vehicles and require registration of all other ATVs, there are still 2.5 million ATVs already being used. Posing a new threat when used irresponsibly, says the Academy, are the four-wheel vehicles.

Mary Alice Helikson, M.D., a pediatric surgeon at UMC says she has seen enough injuries to small children as a result of operating or riding on ATVs.

"The problem is that it (an ATV) is simply too much power for a child younger than 16," she says. "It is too powerful for a young person to have enough sense to control."

Dr. Helikson says that one reason so many young children have access to the ATVs is that "it is a prestige thing" for parents to buy an ATV for their child. Sometimes the parents don't see the possible dangers.

Dr. Metzler agrees.

"I think the real problem with all-terrain vehicles generally is an educational one," he says. "There are people buying these and giving them to their kids. They won't let their kids take a car out, but they'll let them take this thing out."

"It's a unique vehicle. It's a motorized vehicle," Dr. Metzler continues. "And you don't give kids any other motorized vehicles. You're asking them to execute a level of responsibility that most of the time they're not capable of doing."

If there were one aspect of the new legislation that Dr. Helikson would change it would be the section requiring only riders of ATVs under the age of 18 to wear helmets.

"Why do only those under 18 have to wear helmets?" she asks. "Are we just trying to save 18-year-olds' brains? Helmets should be mandatory for everybody."

Dr. Helikson echoes a sentiment more parents make these days.

"My children won't ride them," she says.

"I really think the only way we're going to make lasting changes is to change how people think about them," Dr. Metzler says. "That's the bottom line. Bicycles can be dangerous, and kids get hurt on bicycles, but there's nowhere near the numbers of people who get hurt, and seriously hurt, on bikes as on ATVs."

Dr. Metzler says that although he has allowed his children to ride ATVs, he is aware of the dangers, having ridden the ATVs himself.

Most ATV dealers are pleased with the new law. Since the rise of ATV injuries began receiving increased media attention, sales of the off-road vehicles have dropped. While ATVs, especially three-wheeled models which are now banned, have received negative publicity because of safety concerns, some dealers expect a record sales year. The emphasis in 1988 sales, however, will be on proper safety instruction while operating the ATVs.

> "I think the real problem with all-terrain vehicles generally is an educational one," Dr. Metzler says. "There are people buying these and giving them to their kids. They won't let their kids take a car out, but they'll let them take this thing out."

"This fall is supposed to be one of the biggest selling seasons yet," Darrell Jones, of Kawasaki of Missouri, said in a recent Columbia newspaper interview.

In an April 24, 1988 article in the Columbia Daily Tribune, Jones says the section of the law that bans passengers on the vehicles is crucial. He says this part of the law will enforce what dealers have been telling their customers.

"We sell them as off-road vehicles only," Jones says. "And we would never recommend that passengers be allowed."

Larry Neill, owner of Larry's Honda in Jefferson City agrees.

"We're quite happy with the law," Neill says. "Because now the ATVs will be registered. Now farmers can get a permit and use them as a valid product on their property."

Neill says now that the law is passed sales should get back to normal.

"It's been rough all winter because people didn't know what the law would be," he says. "But I think, no, I know they (ATVs) are a valid product. Lots of people use them as a mechanical horse. I think it's going to be a product with a long history." ■

EDITOR'S DESK

by Donald G. Sessions, M.D.

Letting go, accepting that we will die, creates interesting and powerful possibilities.

Letting Go

He was short and thin. There was something about him that commanded your attention. Perhaps it was his eyes. They were very dark and they were very intense. They seemed to see right through you. Yet it was more than just his eyes. It was really his bearing — the way he carried himself — his very being. He had a quiet dignity which was not so much expressed by the way he talked, or by his clothes, or his posture but just by the way he was.

He had come in on a Monday afternoon, referred with an advanced cancer of the palate. He had a retinue of women with him. His wife was intense and apprehensive. His two daughters were attentive. It was a nervous entourage. They listened to what I said and asked some penetrating questions of me and then turned to him. He would obviously make the final decisions. The emotional tension of his women was an interesting contrast to his own quiet dignity.

I suggested some very aggressive therapy, a combination of irradiation therapy and surgery, and after some discussion they agreed to follow my recommendations. He went through the therapy with grace. At each office visit he was accompanied by his increasingly-attentive wife and at least one daughter. His course did not go smoothly. He had several bouts of facial cellulitis. He was hospitalized for debridement of some bony sequestra. Seldom did he complain. It appeared that he had the pain and his women did the suffering.

Almost three years after the onset of his disease he began to have double vision. Exam showed paralysis of an eye muscle and the CAT scan showed an unresectable recurrence at the base of the skull. This was discussed in depth. He had some chemotherapy without any demonstrable change in the tumor. He continued to have a deep-seated pain which was his permanent companion. His wife and daughters continued to suffer.

I noticed that I was less than enthusiastic when I saw his name on my office list. It was clear that it had nothing to do with him, since he and the family were nothing less than totally supportive of our efforts to care for him. I suppose it was my feeling that I somehow had personally failed him that made me uncomfortable when I knew he was scheduled to be seen in the office. That and my normal disinclination to address the issue of death, especially my own through someone else. The interesting phenomenon, of course, was that when he did arrive in the office, all of this mental activity dissolved in the human connection that was our relationship.

I don't know when it happened. He had had his recurrent disease almost a year. I kept wondering why or how it was that his tumor process was proceeding so slowly. Anyway, sometime toward the end of last year I noticed that a shift had occurred. Something about him was different. It was more noticeable in his wife and daughters than in him.

Continued on page 304

Editor's Desk

Continued from page 303

Somehow the situation was less tragic. His wife lived in a mood of peace. I actually looked forward to their visits. It was clear to me that if they were able to "let go" of the tragedy of the situation then who was I to hold onto it.

From their efforts I saw that they were committed to create value and satisfaction out of what remained of his time on the planet. They were able to do this as a family unit, I believe, because of their willingness to authentically address the facticity of life. Somehow they experienced that life is the way it is — that we are all here and that no matter what, we'll all die — that death, specifically his death, is one of the unalterable characteristics of life.

Letting go, accepting that we will die, creates interesting and powerful possibilities. We can refuse to accept it, saying that we can control life and defeat death; or we can be in wonder at it and celebrate life.

Kahlil Gibran has addressed this issue in *The Prophet*[*]:

> "You would know the secret of death.
> But how shall you find it unless you seek it in the heart of life?
> The owl whose night-bound eyes are blind unto the day cannot unveil the mystery of light.
> If you would indeed behold the spirit of death, open your heart wide unto the body of life.
> For life and death are one, even as the river and the sea are one.
> In the depths of your hopes and desires lies your silent knowledge of the beyond;
> And like seeds dreaming beneath the snow your heart dreams of spring.
>
> For what is it to die but to stand naked in the wind and to melt into the sun?
> And what is it to cease breathing, but to free the breath from its restless tides, that it may rise and expand and seek God unencumbered?
>
> Only when you drink from the river of silence shall you indeed sing.
> And when you have reached the mountain top, then you shall begin to climb.
> And when the earth shall claim your limbs, then shall you truly dance.

He continues to go slowly downhill. I am empowered by his courage. He continues being himself with quiet dignity. His older daughter summed it up the best — "He's really taught us alot." ■

---

[*] Gibran K, The Prophet, NY, AA Knopf, 1977.

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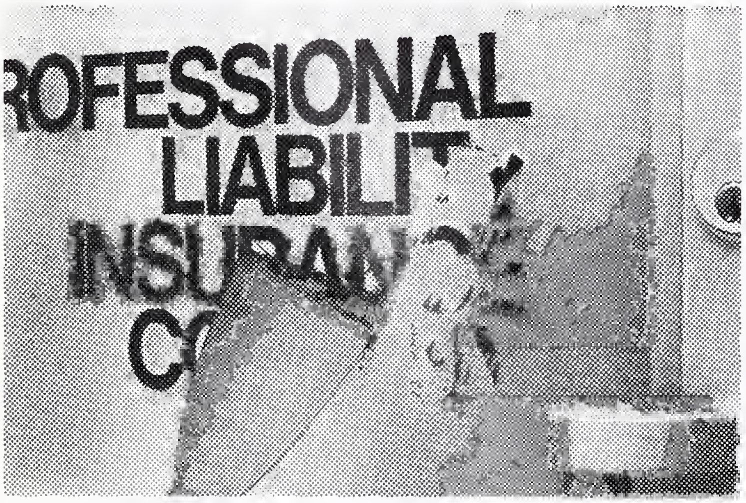

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PRESIDENT'S PAGE

by T. J. Cooper, M.D.

There are many reasons to join organized medicine. Here are some reasons all physicians should consider.

Why belong to organized medicine?

Perhaps the first reason to belong to organized medicine is that it provides necessary services. There is a need for presence — a place to be, a place where those who need to contact physicians for a consensus can find one.

There is a need for response — to the public, be it the legislature or the media.

There is a need for visibility — to assure everyone that medicine, in all its facets, is available to them.

There is a need for action — to protect the practice of medicine from those who are not qualified.

There is a need for unity — in numbers there is strength.

And last, but not least, there is a need for shared equanimity to protect from the parsimony of free loaders, the sensibility of those of us who contribute. ■

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Auxiliary Message

by Eileen Dyer
MSMAA President

We hope your spouse is able to join us this year in our activities for our families, our friends, and the future of medicine.

Spring workshops held in May

They say April showers bring May flowers, but they also bring a bevy of auxiliary activities across the state. For the past six years, spring leadership workshops have been offered as a training opportunity for incoming county officers and chairmen.

Four workshops were held in May in Kansas City, Crystal City/Festus, Joplin and Columbia. A total of 52 Auxilians participated in the training sessions. The traveling troupe consisted of Membership Chairman Carol Sparkman (Mrs. Tom), Health Projects Chairman Marge Perkins (Mrs. David), Legislation Chairman Jean Wankum (Mrs. Robert), AMA-ERF Chairman Judy Corry (Mrs. Frank), Leadership Skills Chairman Pattye Barbee (Mrs. Charles) and facilitator Eileen Dyer (Mrs. Gary).

Membership continues as a primary area of Auxiliary focus. Mrs. Sparkman provided each county chairman with an extensive notebook covering the multiple aspects of member recruitment, revitalization, and retention. Stressing the many benefits of Auxiliary membership such as mutual support, leadership training, health education, resource materials, legislative involvement, and securing a bright future for medicine, Mrs. Sparkman reinforced the importance of each Auxilian working on membership.

Mrs. Perkins shared her extensive resource collection on AIDS materials and stop smoking programs. Mrs. Perkins is coordinating the Auxiliary's efforts in placing AIDS education booklets purchased by the MSMA in every Missouri high school. If you wish more information from Mrs. Perkins, contact her through the state office.

Legislative involvement was stressed by Mrs. Wankum as we look toward increasing activites of an election year, and a new legislative session ahead. Decreasing our fears by increasing our knowledge are paramount to success in the political arena. A vast range of activities are open to us from licking stamps and envelopes to testifying before a committee. However, the bottom line is that physicians and their spouses should develop a personal relationship with their own legislators.

Fund-raising ideas for AMA-ERF were covered by Mrs. Corry. She explained the tremendous benefits derived by the nation's medical schools from AMA-ERF for student loans and research efforts. Participants enjoy shopping in the AMA-ERF Boutique which features gourmet foods this year.

As we shared with the Auxilians across the state we were refreshed by the levels of enthusiasm and interest in our program presentations. We hope your spouse is able to join us this year in our activities for our families, our friends, and the future of medicine. ■

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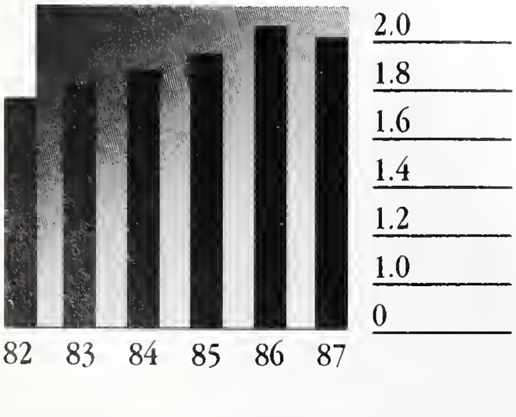

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Legal Peril in Home Health Care

Standards of Care for Modern-Day House Calls

Theresamarie Mantese, J.D., Gerard Mantese, J.D., Vito Mantese, M.D. and Mary L. Mantese, M.S.W., R.N.
St. Louis, Missouri

Once reserved for relatively healthy patients making a satisfactory recuperation from illness, home health care has burgeoned in this decade to include terminally ill patients and those receiving IV therapy of all types. The shift from hospital care to home care has brought a shift in the legal definitions of abandonment, standards of care, and liability. The authors discuss these new issues, pointing out that, to date, none has been litigated in Missouri.

Health care in the 1980s is showing a significant shift from hospital-based to home-based. Medical care that was traditionally performed in the hospital is now being performed in the patient's home. Because of the rising cost of medical care and the financial limitations of government reimbursement, most physicians are discharging patients as soon as they have passed the acute phase of their illness. The remaining medical treatment is being given at home, rather than in expensive hospital beds.

The type of home health care patient is changing. The traditional home health care patient had generally reached a maximum plateau of health and was discharged with minor health problems requiring minimal medical supervision. The patient would require simple medication, routine therapeutic exercises or planned dietary regulation at home.

Today's home health care patient, however, requires more intensive intervention and skilled assessment on the part of the health practitioner. Home health care patients include both adults and children returning home on ventilators, patients receiving intravenous antibiotics, total parenteral nutritional therapy, chemotherapy, 24-hour postpartum patients, AIDS patients, other terminally ill patients, high-risk obstetrical patients, burn or surgical patients often with open wounds, and newborn infants requiring ultraviolet light treatments for hyperbilirubinemia. The list is becoming more extensive every day.

In order to provide services to this diverse group of patients, many different professions are involved in home health care. These include physicians, nurses, social workers, dietitians, physical, occupational and speech therapists, and medical assistants.

Some of the legal concerns that have emerged in the home health care environment are the definition of malpractice, the problem of patient noncompliance with treatment, and the definition of patient abandonment.

What is Ordinary Care?

Generally, malpractice is defined as the departure from the standards of professional care and skill exercised by ordinary skillful, careful and prudent medical personnel acting under similar circumstances.[1] A person within the health care profession thus is required to exercise ordinary or due care in treating a patient. For example, ordinary care for physicians or nurses in the home treatment of a diabetic patient with leg ulcers would require, at a minimum, care for the wound, teaching the patient about infection, and instructing the patient what to do in the case of an emergency.

However, at other times, the question of what constitutes ordinary care is difficult to define. The home health care field is so new that no clear standards have emerged to define "ordinary care" in this setting.

There are compelling reasons to conclude that hospital standards do not apply to home health care practitioners when they render home patient treatment. For example, when a patient receives blood products in a hospital, there will usually be two nurses who will verify that the blood is compatible with the patient's. On the other hand, it is too costly for two nurses to make a trip to a home to perform this double-check.

To further illustrate, patients in the hospital are never taught to reuse insulin syringes and bladder catheters. These devices are discarded after use. Yet, in the home, patients are taught how to safely reuse the devices. Thus, because of the inherent differences in home health treatment and hospital treatment, the standards for satisfying "ordinary care" must also inevitably differ.

Malpractice issues in the home health care environment have not been litigated in Missouri. Home health care practitioners, therefore, have an opportunity and duty to develop standards and policies to define ordinary care. At a minimum, a home health care practitioner should, in addition to using due care in treating the patient, (a) explain the treatment to the patient, (b) instruct the patient that his participation in the treatment process is essential, (c) advise the patient what to do in case any difficulties arise when the practitioner is not present, and (d) notify the patient in advance of any termination in treatment.

Liability When Patient is Incompliant

One of the most difficult problems faced by a home health care practitioner occurs when a patient will not follow the prescribed treatment. Missed clinic appointments, noncompliance with treatment plan — diet, medicine, dressing changes — are common in the home health care practice. The home health care practitioner may be confronted with a volatile situation when the need for treatment is critical and the patient is not following the treatment.

This problem occurred in the management of a patient with severe hypertension. The home health care practitioner told the patient how important it was to take the prescribed medication to lower his blood pressure. Although the patient could afford the medication financially, he simply did not think the medication was important, no matter how often the practitioner emphasized its importance.

The patient was told that if he did not take the prescribed medication, the home health care service would be discontinued. He refused to take the medicine, and the home health care was discontinued. One month later, the patient had a stroke that left him paralyzed on the left side.

The above case illustrates the need for the home health care practitioner to adequately inform and warn the patient of the importance of following treatment,[2] and to document that the patient *was* informed and understood the information supplied.

Failure to instruct the patient of the importance of following treatment could result in a finding that the practitioner did not satisfy the standard of due care. The patient must be competent and alert to understand and make a decision concerning the treatment.[3] All instructions conveyed to the patient should be documented, including the fact that the patient was competent to understand such instructions.

What Constitutes Abandonment?

Abandonment is an issue that must be considered when a patient is noncompliant with his treatment, and the practitioner decides to terminate treatment. Patients who are receiving home health care service may be very ill, and terminating services prematurely may permit the illness to become more severe. Yet, termination of services under these circumstances may be necessary to prevent the home health care practitioner from responsibility for a situation which cannot be prevented — the worsening condition of the patient caused by the patient's refusal to follow treatment. Hence, a dilemma emerges between ethical responsibility to the patient and legal concerns.

The question may arise as to whether the termination constitutes reasonable discharge or negligent abandonment. The patient must be given adequate notice of discharge, giving him sufficient time to obtain alternative treatment or otherwise prepare for the termination of services. Providing adequate notice of termination will help avoid later charges that the termination was abandonment, rather than discharge.

Notice of discharge should be oral and immediately confirmed in writing. The notice should state that the termination will be effective "*x* days from [today's date]." The notice should include not only the date on which home health care will be terminated but the reasons for termination.

Proper Documentation

While documentation is important to all persons in the health care profession, it is crucial to the home health care practitioner. The practitioner should document his experiences with the patient in an objective manner. Opinion or conclusory statements might not be admitted into evidence, whereas objective statements of facts will be admitted into evidence.[4] Instead of stating that "the patient is not complying with the recommended treatment," it would be better to state, "asked patient if took medicine, patient stated, 'I will not take medicine, I will do what I want.' " The more detailed and objective the documentation, the greater the credibility and likelihood of admissibility of the document.

Other useful forms of documentation are reviews and incident reports concerning home health care patients. Incident reports are privileged and not subject to legal discovery in most circumstances. They are protected by the work-product doctrine if the incident report was prepared for the purpose of seeking legal advice or was prepared in anticipation of litigation.[5] Only when the *sole* purpose of the incident report is for prevention of similar incidents (loss prevention or risk management) is the incident report discoverable.[5] The incident reports should be used along with weekly reviews to analyze problems with specific patients. This will enable the home health care service to develop policy in handling difficult patients.

Conclusion

Home health care is a fast-growing area of health care in the United States. Its growth has caused home health care practitioners to question their legal responsibility in undertaking care of patients in the home. The practitioner is often in a particularly volatile situation because the practitioner depends greatly on the patient to be a partner in the treatment process. Further, because the patient is at home in familiar surroundings, the practitioner does not appear as authoritative to the patient, and the practitioner may have less control over the patient.

Sensitivity is the key. The home practitioner must be sensitive to the importance of fully explaining the treatment process to the patient and the need for mutual participation in the process. He must evaluate the competence and rationality of the patient to be able to appreciate the necessity of complying with treatment, and then must document every aspect of treatment. Adherence to these rules will help advance the safe and successful expansion of home health care.

References

1. *See, e.g., Williams v. Chamberlain,* 316 S.W.2d 505 (Mo. 1958).
2. *Cf., Zahorsky v. Griffin, Dysart, Taylor, Penner, & Lay, P.C.,* 690 S.W.2d 144, 154 (Mo. Ct. App. 1985) (failure to inform patient of serious risks of operation may constitute malpractice).
3. *Cf., Mitchell v. Robinson,* 334 S.W.2d 11,19 (Mo. 1960) (presurgery disclosure of risks must be made when patient is in possession of his faculties).
4. Although conclusory, nonobjective medical reports may not run afoul of the hearsay rule, *see* Fed. R. Evid. 803(4), such reports could be barred under Fed R. Evid. 403.
5. *Enke v. Anderson,* 733 S.W.2d 462 (Mo. Ct. App. 1987).

Abbreviations

S.W.2d — Southwest Reporter, 2nd edition (reports state appeals court rulings)
Mo. Ct. App. — Missouri Court of Appeals
Fed. R. Evid. — Federal Rules of Evidence

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Reprints

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Hysterectomy

A Comparative Statistical Study of Abdominal vs. Vaginal Approaches*

S. Robert Kovac, M.D., Blase J. Pignotti, M.D., and
Gary A. Bindbeutel, M.B.A.
St. Louis, Missouri

Abdominal hysterectomy has become the approach of choice for this often-performed procedure in this country. The authors delineate the advantages of the vaginal operation in a statistical comparison of hysterectomies performed at their institution. They recommend a recommitment to training young physicians in the vaginal technique.

Hysterectomy, the second most common major operation in the United States, costs approximately $1.7 billion per year.[1] Such a frequently-performed operation should be demonstrated to be both medically effective and economically justifiable. Currently, the ratio of abdominal to vaginal hysterectomies in this country is 3:1.[2] Does this ratio reflect a preponderance of "serious pelvic disease," contraindicating the vaginal approach, or does it represent physician preference or the technical expertise of gynecologic surgeons?

The decline in popularity of vaginal surgery is paradoxical, since over a century ago this procedure formed the basis for the then-new specialty of gynecology.

The development of gynecologic subspecialties has also contributed to the decline in vaginal surgery. Physicians specializing in treating pelvic malignancy, in performing laparoscopic surgery to treat endometriosis, or in conducting operative procedures to perform high-risk deliveries and tubal sterilization have had little opportunity to learn the art of vaginal surgery. Furthermore, the reduction in the number of practitioners of this art at medical schools compounds the problem for the next generation of physicians. Residency training programs have largely failed to produce skilled vaginal surgeons.

The Collaborative Review of Sterilization Multi-Center Observational Study (CREST), coordinated by the Centers for Disease Control,[3] was the first prospective attempt to statistically analyze the comparative risks of complications in women undergoing vaginal or abdominal hysterectomies. The CREST report confirmed the vaginal route's superiority in reducing morbidity and economic costs. However, critics argue that results from different institutions could not be validly compared because of the inability to match vaginal with abdominal groups for all variables.

Mattingly[4] readily acknowledged the advantages of the vaginal procedure but concluded that more serious pelvic disease mandates an abdominal hysterectomy. In order to test these discrepancies, a scientifically sound study must compare groups of well-matched abdominal and vaginal hysterectomy patients. Only then can any conclusion about the relative superiority of one approach over the other for similar medical conditions be made.

Presented in part at the First International Conference on Vaginal Surgery, Today's and Tomorrow's Techniques and Choices, March 6-7, 1987.

Table 1

Hysterectomies Performed At St. John's Mercy Medical Center from Jan. 1984-Jan. 1985
For All Indications Excluding Cancer
(n = 640)

	Mean Values (StD. Deviations)		
	Abdominal (n = 394)	*Vaginal (n = 246)*	*P*
Uterine Weight (Grams)	199 (163)	120 (86)	<0.001
Transfusions* (Patients)	45	8	<0.001
Hospital Cost (Dollars)	3876 (1578)	3088 (797)	<0.001
Length of Stay (Days)	7.3 (2.3)	6.0 (2.0)	<0.001

* Transfusions computed by χ^2
Computations by: Medical Data Systems, Inc.

According to the National Center for Health Statistics, 672,000 hysterectomies were performed in 1983.[2] The type of operation selected has been shown to be more a reflection of regional medical training differences and subsequent surgical practice than any major difference in underlying pathologic indications or population groups.[5, 6] A review of the literature clearly shows that the operator's skill and experience — not pathologic indications — are the major factors that determine whether a hysterectomy is performed abdominally or vaginally.[7-12]

Are patients well-served by the growing reliance on abdominal hysterectomy, either medically or economically? Reduced morbidity, operation time and hospital stay, lower cost, and more rapid recovery have always been considered hallmarks of vaginal hysterectomy.[3, 13] In this era of prospective price controls and DRGs, gynecologic surgeons who perform costly procedures may put their hospitals at risk for reimbursement.

In view of these concerns, we decided to compare the two procedures in terms of medical effectiveness and economic justification in patients grouped according to pathology and other variables.

Materials and Methods

We retrospectively reviewed all hysterectomies performed for noncancerous conditions at St. John's Mercy Medical Center from January, 1984, to January, 1985. Since uterine weight is often cited as a determinant in selecting the operative approach, we elected to document uterine size as well as complication rates and their relationship to cost, length of stay, and blood loss. Study I included the total series of patients operated on for all indications (640 patients). In Study II we analyzed only those patients with comparable indications (442 patients). To provide the better comparison, in Study III we evaluated only those patients in whom leiomyomas were the first-listed diagnosis (222 patients). In order to provide the best possible comparison, in Study IV we evaluated only patients with cervical epithelial neoplasia (CIN) III without any associated pathologic condition or other confounding factors in which vaginal hysterectomy has been suggested as the treatment of choice.[14, 15] However, abdominal hysterectomy is still employed with conditions such as these. Statistical differences were determined by the Student t test and analysis of variance by the F test.

Study I: Hysterectomies Performed for All Indications

Of the 640 hysterectomies performed for noncancerous conditions, 394 were abdominal procedures and 246 were vaginal procedures. Table 1 gives the mean values for uterine weight, cost, number of transfusions and length of stay for each group of patients.

Study II: Hysterectomies Performed for Comparable Indications

To derive a population with comparable indications from the total series, we selected only those patients with matching ICD9 codes. Patients who did not undergo a vaginal or abdominal procedure corresponding to a specific ICD9 code were omitted from the study. In addition, all patients who had reparative procedures associated with hysterectomy were excluded. The data from this study are presented in Table 2.

Study III: Hysterectomies Performed for Leiomyomas

There were 222 patients (170 abdominal cases and 52 vaginal cases) in whom leiomyomas (ICD9-2189) were the first-listed diagnosis. These patients were assessed for the same variables as the patients in Studies I and II (Table 3).

Study IV: Hysterectomy Patients with a Diagnosis of CIN III

Since Studies I through III suggested that vaginal hysterectomy was the superior method, the need was

Table 2

Hysterectomies Performed At St. John's Mercy Medical Center from Jan. 1984-Jan. 1985
For Comparable Indications (based on ICD9 codes)
(n = 442)

	Mean Values (StD. Deviation)		
	Abdominal (n = 326)	*Vaginal (n = 116)*	*P*
Uterine Weight (Grams)	210 (170)	146 (106)	<0.001
Transfusions* (Patients)	41	4	<0.001
Hospital Cost (Dollars)	3860 (1619)	2903 (748)	<0.001
Length of Stay (Days)	7.3 (2.4)	5.4 (1.5)	<0.001

*Transfusions computed by χ^2
Computations by: Medical Data Systems, Inc.

Table 3

Hysterectomies Performed At St. John's Mercy Medical Center from Jan. 1984-Jan. 1985
For Leiomyomas
(n = 222)

	Mean Values (StD. Deviation)		
	Abdominal (n = 170)	*Vaginal (n = 52)*	*P*
Uterine Weight (Grams)	278 (205)	193 (138)	<0.001
Transfusions* (Patients)	22	3	NS
Hospital Cost (Dollars)	3793 (1642)	2892 (894)	<0.001
Length of Stay (Days)	7.2 (2.2)	5.3 (1.8)	<0.001

*Transfusions computed by χ^2
Computations by: Medical Data Systems, Inc.

apparent to develop a more scientifically sound method that would compare women with identical ICD9 codes who were matched for other potentially confounding variables. Thus we chose 38 patients with a diagnosis of CIN III who had hysterectomies at St. John's from 1984 through 1986; this three-year period ensured a statistically meaningful sample size.

Abdominal hysterectomy was performed in 16 patients and vaginal hysterectomy in 22 patients for a ratio of 1:1.3. None of the patients in this group underwent any incidental procedures. Thus, all cases potentially could have been performed vaginally.

In this study group we sought to measure other variables besides pathology that had affected the decision as to which approach was used for hysterectomy. Age, weight, height, and parity were documented. The number of physicians performing each procedure, as well as the age of the physician, were also recorded. Other assessments included uterine size, length of time each patient spent in surgery, administration of postoperative pain medications, and complications. The length of each patient's hospital stay and the cost of each stay were recorded. Table 4 presents the mean values and range for each of these variables.

Results

The data from Study I provide some significant comparisons of abdominal hysterectomy versus vaginal hysterectomy as reflected in dollar costs, length of stay, and number of patients transfused. The differences for the vaginal group were statistically significant ($p < 0.001$). Although mean uterine weight was 79 g greater in the abdominal group, we do not believe this to be of surgical significance.

A distinctive pattern begins to emerge from the data of Study II. The vaginal group showed significantly lower cost, length of stay and number of patients transfused. There was a smaller differential in mean uterine weight (64 g) between the two groups.

Study III showed that patients matched according to condition (leiomyomas) exhibited a statistically significant difference when the outcomes of abdominal versus vaginal approaches were measured. The mean hospital costs for patients in this study were $901 less for the vaginal group, who also stayed 1.9 fewer days. Transfusion was required for 22/170 patients (13%) who underwent abdominal hysterectomy, whereas only 3/52 (6%) of the vaginal hysterectomy patients required blood replacement. The mean uterine size in the two groups differed by 85 g.

Table 4

Hysterectomies Performed At St. John's Mercy Medical Center from Jan. 1984-Jan. 1985
For Patients With Leiomyomas Greater Than 150 gm
(n = 151)

	Mean Values (StD. Deviation)		
	Abdominal (n = 116)	*Vaginal (n = 35)*	*P*
Uterine Weight (Grams)	341 (207)	281 (143)	<0.001
Transfusions* (Patients)	18	2	NS
Hospital Cost (Dollars)	3850 (1863)	2684 (814)	<0.001
Length of Stay (Days)	7.2 (2.3)	4.9 (1.5)	<0.001

*Transfusions computed by χ^2
Computations by: Medical Data Systems, Inc.

Table 5

Hysterectomies Performed at St. John's Mercy Medical Center, 1984-86,
Patients with CIN III (n = 38)

	Abdominal (n = 16)		*Vaginal (n = 22)*		
	Mean	*(Range)*	*Mean*	*(Range)*	*P*
Age (yrs.)	35	(22- 57)	36	(23- 59)	NS
Weight (lbs.)	137	(104-240)	131	(103-169)	NS
Height (in.)	64	(62- 70)	65	(59- 70)	NS
Parity	2.7	(0- 4)	2	(0- 4)	NS
Uterine Weight (g.)	81	(35-125)	96	(35-200)	NS
Surgical Time (min.)	77	(50-200)	38	(20- 65)	<0.001
Length of Stay	6	(4- 8)	4	(2- 5)	<0.001
Morbidity (Rate %)	13	(76%)	2	(8.6%)	<0.001
Cost ($)	3552	(2827-4503)	2695	(2015-3460)	<0.001
Postoperative Pain Medications					
Injection	7	(2- 11)	3	(0- 5)	*
Oral	16	(8- 36)	7	(0- 17)	*
Physicians (#)	10		9		
Average Age	52	(37- 65)	42	(32- 48)	*

*Not Statistically Analyzed.
Computation by: Medical Data Systems, Inc.

To assess the effect of uterine weight, we further extracted from this group those uteri weighing more than 150 g (Table 4). In this group, vaginal patients saved an average of $1,166 and spent 2.3 fewer days in the hospital. The abdominal patients required three times as many blood transfusions, although the difference did not reach statistical significance. The mean uterine size in the vaginal and abdominal subgroups differed by 60 g.

An analysis of the patients in Study IV (primary diagnosis of CIN III) (Table 5) showed that over 75% of the abdominal group had postoperative complications, while 94% of the patients in the vaginal group had none and spent two days fewer in the hospital. The mean cost for those who underwent abdominal surgery was $857 higher. The mean uterine weight in the two groups was nearly identical, as were other variables such as age, weight, height and parity. However, the group who underwent abdominal surgery spent twice as much time in surgery, on average, as the vaginal group. There were 1.3 complications per physician in the abdominal group while the vaginal group experienced only 0.2 complications per physician.

Although the number of physicians performing both types of procedures on patients in Study IV were similar, younger surgeons who had experience and training in vaginal surgery appeared more likely to perform a vaginal hysterectomy. Since uterine size and pathologic condition were determined not to be significant variables, it is suggested that the surgeon's training and technical expertise played a major role in the selection of operative route.

Discussion

This series of studies defines groups of patients with comparable pathological indications and statistically compares abdominal versus vaginal hysterectomy, based on indirect indices of complication rates: transfusions, length of stay and cost. Our results indicate that economic costs, length of hospital stay and need for blood replacement are significantly reduced in patients who undergo vaginal hysterectomy. These differences become even more apparent when abdominal and vaginal hysterectomies for comparable indications are analyzed.

Vaginal hysterectomy has been declining in frequency in recent decades. There has been an increasing reliance upon abdominal hysterectomy without clear-cut evidence that in every case it represents the best choice for a particular patient. As a result, the traditional indications and contraindications for either type of surgery — largely accepted without question — have become obscured, and the advantages of the vaginal route, demonstrated in this series of studies, have been ignored.

In conclusion, the cost of medical care will continue to be a major concern, and we must be able to clearly demonstrate that any surgical procedure represents not only the best in terms of patient care, but the most economical in terms of dollars spent. Thus, we urge other institutions to carry out statistical analyses of outcome studies comparing abdominal and vaginal hysterectomy. The results will unequivocally document indications and cost-effectiveness against which vaginal hysterectomy should be measured.

Should vaginal hysterectomy's advantages be proven by these additional studies, medical schools will need to provide education in the advantages and training in the techniques of vaginal surgery.

To seek both quality and optimum price in medical care simultaneously is a challenge, particularly in light of the greater technical complexity of the assessment of quality. But knowledgeable physicians can easily meet that challenge if they make it their objective. More than ever, medicine as a whole needs to move toward using and developing efficient, low-risk, non-invasive type procedures that correct a problem in a single attempt. For that reason, decisions about the quality and the price of care need to be made as near the point of service delivery as possible.

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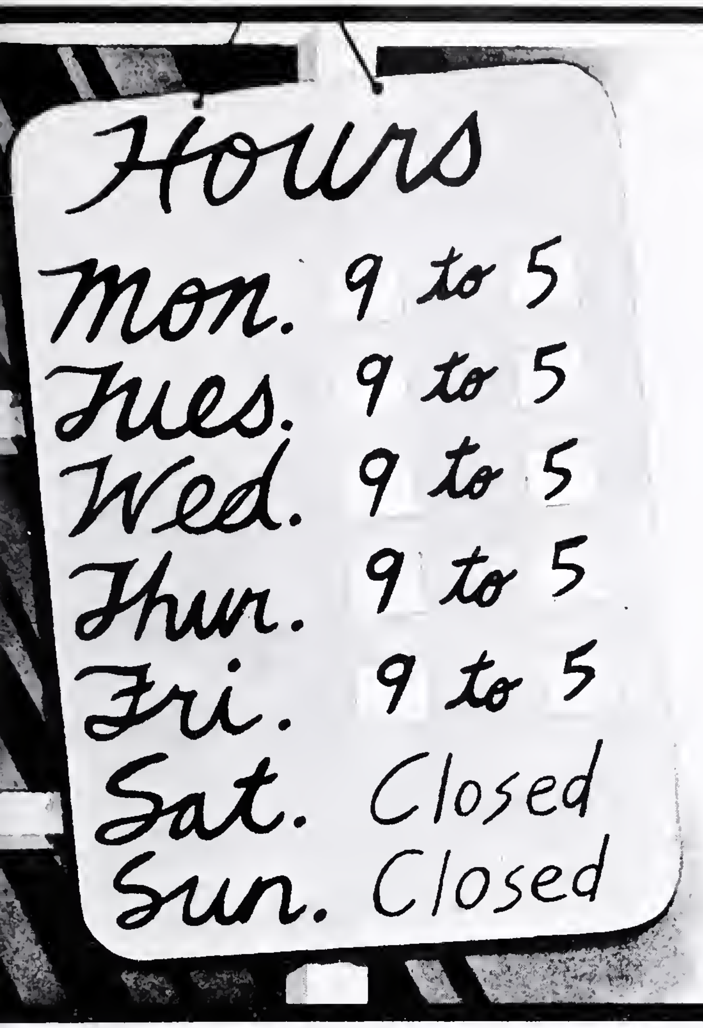

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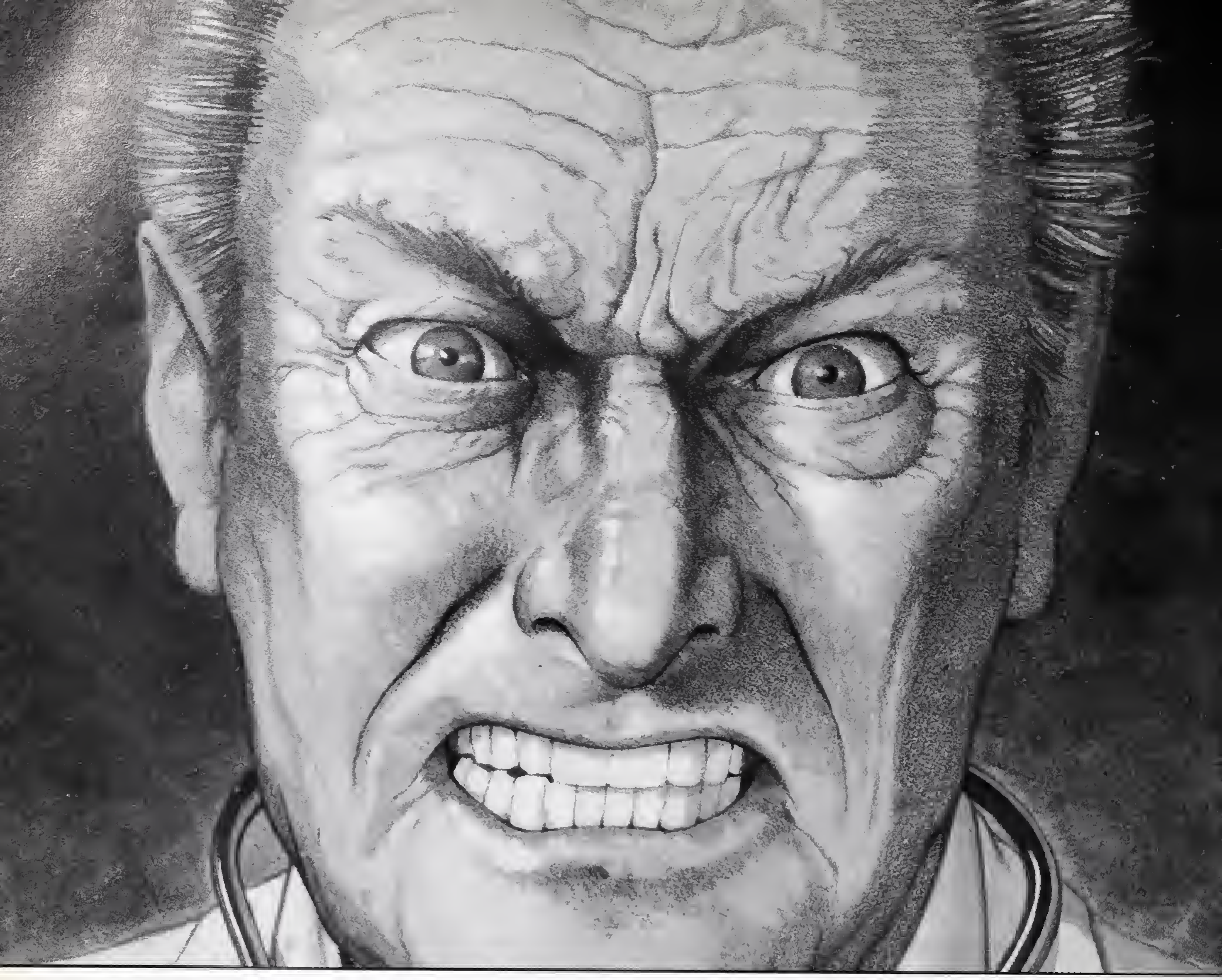

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■ **Anthony R. Arevalos, M.D.,** 3333 McIntosh, Joplin 64801, has become a member of the Jasper County Medical Society. Dr. Arevalos received his preliminary education at Oklahoma University and obtained his medical degree at Oklahoma University in 1981. He completed his residency at St. Joseph's Medical Center, Phoenix, AZ. Dr. Arevalos specializes in internal medicine.

■ **Catherine E. Beal, M.D.,** 6150 Oakland Avenue, St. Louis 63139, has become a member of the St. Louis Metropolitan Medical Society. Dr. Beal received her preliminary education at St. Louis University and obtained her medical degree at the St. Louis University School of Medicine in 1982. She completed her residency at the St. Louis University Medical Center, St. Louis, MO. Dr. Beal specializes in diagnostic radiology.

■ **Clyde M. Burnham, M.D.,** 1102 W. 32nd St., Joplin 64801, has become a member of the Jasper County Medical Society. Dr. Burnham received his preliminary education at the University of Denver and obtained his medical degree at the University of Colorado School of Medicine in 1973. He completed his residency at Mercy Medical Center, Denver, CO. Dr. Burnham specializes in family practice.

■ **David J. Clymer, M.D.,** Carondelet Medical Building, Suite 426, 1010 Carondelet Dr., Kansas City 64114, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Clymer received his preliminary education at Kansas University and obtained his medical degree at Vanderbilt University in 1980. He completed his residency at Kansas University Medical Center, Kansas City, KS. Dr. Clymer specializes in orthopaedic surgery.

■ **Lawrence A. Gans, M.D.,** 517 S. Euclid, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Gans received his preliminary education at Columbia University and obtained his medical degree at Case Western Reserve University in 1977. He completed his residency at Washington University School of Medicine, St. Louis, MO. Dr. Gans specializes in ophthalmology.

■ **Robert J. Gresick, Jr., M.D.,** 3450 Bridgeland Drive, Bridgeton 63044, has become a member of the St. Louis Metropolitan Medical Society. Dr. Gresick received his preliminary education at St. Louis University and obtained his medical degree at the St. Louis University School of Medicine in 1981. He completed his residency at the University of Chicago Hospitals, Chicago, IL. Dr. Gresick specializes in diagnostic radiology.

■ **Terry E. Hall, M.D.,** P.O. Box 233, 2525 Miller, Bethany 64424, has become a member of the Grand River County Medical Society. Dr. Hall received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1981. He completed his residency at the USAF Medical Center, Scott AFB, IL. Dr. Hall specializes in family practice.

■ **Kimberly W. Hayes, M.D.,** 1515 West Truman Road, Suite 306, Independence 64050, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hayes received her preliminary education at the University of Missouri-Columbia and obtained her medical degree at the University of Missouri-Columbia School of Medicine in 1983. She completed her residency at St. Luke's Hospital, Kansas City, MO. Dr. Hayes specializes in obstetrics/gynecology.

■ **Laura R. Hulbert, M.D.,** 2900 Lemay Ferry, Suite 228, St. Louis 63125, has become a member of the St. Louis Metropolitan Medical Society. Dr. Hulbert received her medical degree at Washington University in 1981. She completed her residency at Jewish Hospital, Washington University, St. Louis, MO. Dr. Hulbert specializes in obstetrics/gynecology.

■ **Mark A. Hurt, M.D.,** 615 S. New Ballas Road, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Hurt obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1982. He completed his residency at the University of Missouri, Columbia, MO. Dr. Hurt specializes in pathology.

■ **David L. Jobe, M.D.,** 2700 McClelland Blvd., Joplin 64801, has become a member of the Jasper County Medical Society. Dr. Jobe received his preliminary education at Pittsburgh State University and obtained his medical degree at Creighton University in 1975. He completed his residency at Creighton University, Omaha, NE. Dr. Jobe specializes in psychiatry.

■ **Ali S. Kamal El-Din, M.D.,** 1325 S. Grand Blvd., St. Louis 63107, has become a member of the St. Louis Metropolitan Medical Society. Dr. Kamal El-Din received his preliminary education at Abbassia Secondary School, Cairo, Egypt and obtained his medical degree at the Ain Shams University, Faculty of Medicine, Cairo, Egypt in 1977. He completed his residency at Central Birmingham Hospitals, Birmingham, U.K. Dr. Kamal El-Din specializes in anesthesiology.

■ **Michele E. Kemp, M.D.,** 1585 Woodlake Drive, Chesterfield 63017, has become a member of the St. Louis Metropolitan Medical Society. Dr. Kemp received her preliminary education at Washington University and obtained her medical degree at the Washington University School of Medicine in 1981. She completed her residency at St. Louis Children's Hospital, St. Louis, MO. Dr. Kemp specializes in pediatrics.

■ **Mary Ellen McIntire, M.D.,** Box 186, Otterville 65348, has become a member of the Pettis County Medical Society. Dr. McIntire received her preliminary education at Memphis State University and obtained her medical degree at the University of Tennessee College of Medicine in 1985. She completed her residency at Baptist Memorial Hospital, Memphis, TN. Dr. McIntire specializes in family practice.

■ **Timothy L. McIntire, M.D.,** P.O. Box 1706, Sedalia 65301, has become a member of the Pettis County Medical

Society. Dr. McIntire received his preliminary education at Southeastern Louisiana University and obtained his medical degree at the Louisiana State University Medical Center School of Medicine in 1983. He completed his residency at Baptist Memorial Hospital, Memphis, TN. Dr. McIntire specializes in pathology.

■ **Scott W. McMurray, M.D.,** 3231 S. National, Springfield 65807, has become a member of the Greene County Medical Society. Dr. McMurray received his preliminary education at the University of Georgia and obtained his medical degree at Vanderbilt University in 1982. He completed his residency at Tulane University Affiliated Hospital, New Orleans, LA. Dr. McMurray specializes in orthopaedic surgery.

■ **Christopher J. Meoli, D.O.,** 1901 Sunset, P.O. Box 3932, Poplar Bluff 63901, has become a member of the Butler-Wayne-Ripley-Carter County Medical Society. Dr. Meoli received his preliminary education at C.W. Post College of LIU and obtained his osteopathic degree at the Kansas City College of Osteopathic Medicine in 1972. He completed his residency at J.F.K. Memorial Hospital, Stratford, NJ. Dr. Meoli specializes in radiology.

■ **James T. Merenda, M.D.,** 1465 S. Grand, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Merenda obtained his medical degree at the St. Louis University School of Medicine in 1982. He completed his residency at St. Louis University, St. Louis, MO. Dr. Merenda specializes in orthopedic surgery — spine.

■ **Scott A. Mirowitz, M.D.,** Jewish Hospital, Washington University, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Mirowitz received his preliminary education at Tulane University and obtained his medical degree at the Washington University School of Medicine in 1985. He is completing his residency at Jewish Hospital, Washington University, St. Louis, MO. Dr. Mirowitz specializes in diagnostic radiology.

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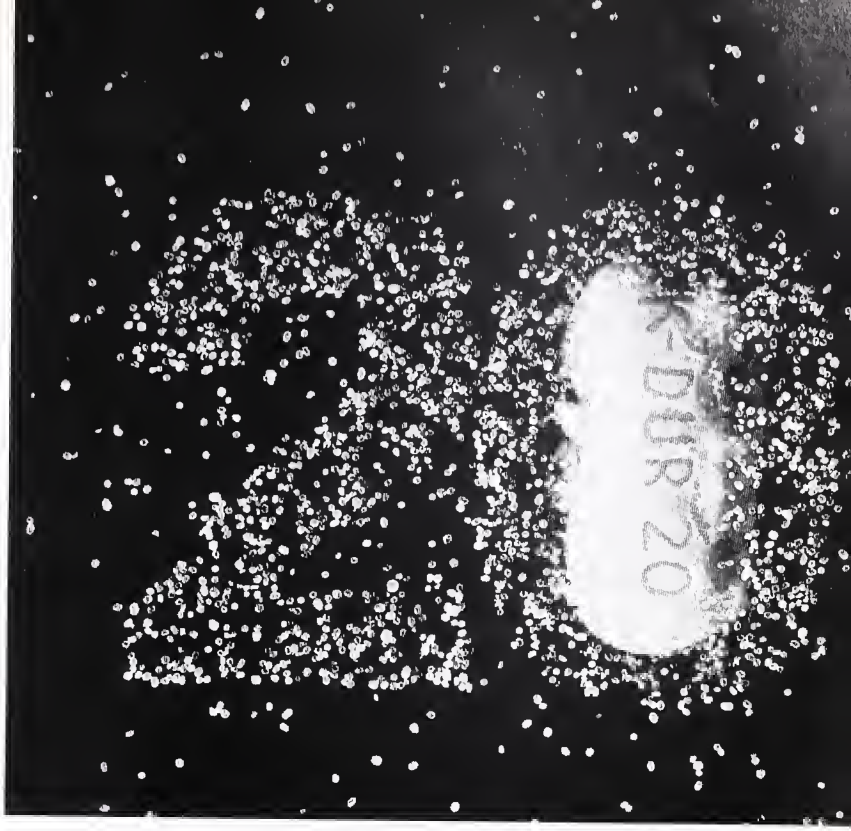

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1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

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3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

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All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

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Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

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Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS)**; other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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Medical School News

The University of Missouri-Columbia

■ **Imad Al-Basha, M.D.,** assistant professor of psychiatry, and **Bernard Beitman, M.D.,** associate professor of psychiatry, recently received awards from the Department of Psychiatry. Dr. Al-Basha received the Guhleman Award for Clinical Excellence, established to honor **Henry V. Guhleman, M.D.,** clinical professor of psychiatry, for his many years of distinguished service to the University. Dr. Beitman received the Residents' Award for Teaching Excellence.

■ **Sheldon Braun, M.D.,** associate professor and director of pulmonary medicine, participated in the American College of Chest Physicians Board of Regents meeting in Chicago earlier this year.

■ **John Byer, M.D.,** associate professor of neurology, and **Mary Kay Gumerlock, M.D.,** assistant professor of neurosurgery, are leading the University's participation in a nationwide study of carotid endarterectomy. The School of Medicine is one of 41 centers nationwide participating in the five-year National Institutes of Health study to determine if carotid endarterectomy is effective in preventing strokes and, if so, for which patients the surgery is indicated. Controversy surrounds the procedure because of recent reports that it is overused and causes complications, including stroke and death.

■ **David Clark, M.D.,** assistant professor of dermatology, is on a one-year leave at Indiana University Medical Center in Indianapolis where he is studying microscopically-oriented histological surgery. The Mohs procedure, a treatment for recurrent and high-risk basal-cell carcinomas, is considered the best method for removing skin tumors in difficult locations. Plans call for establishing a Mohs surgery unit at University Hospital and Clinics.

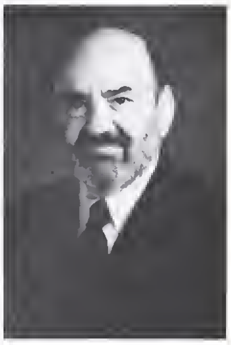
■ Internationally-known cardiovascular surgeon **Michael DeBakey, M.D.,** chancellor of Baylor College of Medicine and professor and chairman of surgery, spoke at the University of Missouri-Columbia on April 29 in honor of the 30-year anniversary of the University Hospital's open heart surgery program. Dr. DeBakey joined **Jack Curtis, M.D.,** associate professor and chief of cardiothoracic surgery, and **Interim Dean Hugh E. Stephenson Jr., M.D.,** founder of the University's open heart surgery program, in celebrating the anniversary with former patients who were the first heart cases at University Hospital. When Dr. Stephenson began performing open heart surgery in 1958, University Hospital became one of only 20 hospitals in the country doing open heart surgery. St. Louis University was the only other hospital in Missouri to have had an open heart surgery case. Now, cardiothoracic surgeons at University Hospital perform more than 520 open heart procedures each year. "Most people don't realize the extent of our services," says Dr. Curtis. "We've been doing this for 30 years. We were one of only 20 hospitals nationally to begin it. And we continue to provide services not available anywhere else in central Missouri."

■ The School recently received two gifts from private corporations. Marion Laboratories Inc., a pharmaceutical company in Kansas City, is providing $60,000 for a two-year *Marion Young Investigator Award*. Baxter Inc. of Chicago recently donated funds to the Division of Nephrology for an Astra 8 clinical analyzer. The instrument is used to measure serum and glucose levels in dialysis patients.

■ Alumni are funding new scholarships for medical students at the University of Missouri-Columbia School of Medicine. The *Medical School Foundation* this year initiated five $2000 scholarships with alumni endowments. Students receiving these awards are third-year students **Stephen Adams** of St. Louis, **Pam Miller** of Newburg, MO and **Morris Seligman** of St. Louis; and fourth-year students **Tim Duniho** of Springfield, MO and **Ann Mushinsky-Tralles** of St. Louis. The Foundation and the Alumni Association have also joined together in establishing a new University Alumni Association Scholarship of $1390. Fourth-year student **Bruce Faerber** of Columbia received this award.

■ **William Gaunt, M.D.,** has been named associate professor emeritus of medicine and **Claude Kirkpatrick Leeper, M.D.,** has been named professor emeritus of pathology.

■ **Laura Hillman, M.D.,** professor of child health, has developed a new method of tracking a baby's calcium intake. Dr. Hillman's research is aimed at developing new infant formulas to help premature babies develop as quickly as they would have in the womb. While more and more premature infants survive each year because of recent medical advances, providing the same nutrition the baby would have received if carried full-term is still the single largest problem in saving these infants, she says.



■ **James M. A. Weiss, M.D.,** professor and chairman of psychiatry, has been selected by St. Mary's Health Center in St. Louis to receive the fourth annual **Louis H. Kohler, M.D.,** Memorial Distinguished Lectureship Award. In March, Dr. Weiss gave a lecture to the medical staffs of St. Mary's and St. Louis University on "Evaluating Suicide Risk in Medical and Psychiatric Patients." He also gave a lecture open to the public on "Psychopathy: The Nature of Antisocial Behavior" and was honored at a reception and dinner. The lectureship and $1000 award is in honor of the late Dr. Kohler, a leader in Missouri medicine who served for more than 50 years on the staffs of St. Mary's Health Center, St. Louis University and St. Louis State Hospital.

■ **Greg Anthony,** a second-year student in Health Services Management has been awarded one of five national Bugbee-Falk Book Awards from the Association of University Programs in Health Administration. Anthony, a Nebraska native, was chosen for his outstanding academic abilities and leadership skills.

■ Third-year student **Mary Jo Fisher** of Ava, MO has been awarded the *Harry G. Hardt, M.D., Scholarship*. Dr. Hardt, a retired surgeon from Elmhurst, IL, endowed the $1,500 award to help medical students who plan to return to south central or southwest Missouri to practice medicine.

■ **Acy Charles Platt**, a graduate student working on a dual degree in Health Services Management and Industrial Engineering at the University of Missouri-Columbia has been awarded the national *Richard P. Covert Scholarship*. The $1000 award, funded by the Healthcare Information and Management Systems Society of the American Hospital Association, is made to encourage scholarship in the field of health care management systems.

■ Thirty medical and graduate students delivered oral and poster research presentations at the School's annual Student Research Day on April 13. In the medical student category, **Sarvam TerKonda**, M-2, won first place for the presentation, "Effects of Atrial Natriuretic Factor on the Baroreflex Control of Renal Sympathetic Activity in the Conscious Rabbit." **J. A. Shelton**, M-3, won second place for the presentation, "Hemorrhagic Hypotension Alters Acetylcholine Relaxation Responses of Isolated Coronary Arteries." **Ronald Brinck**, M-2, won third place for his poster presentation, "Direct Measurement of Cytosolic Calcium Concentrations in Resting and Stimulated Rat Submandibular Gland Acini."

In the graduate student category, **Matthew Cowlen**, pharmacology, won first place for his presentation, "Evidence for Alpha-1 Adrenergic Receptor Internalization in a Cultured Smooth Muscle Cell Line Following Exposure to a Combination of Agonist Plus Protein Kinase C. Activator." **T. J. Murphy**, pharmacology, won second place for the presentation, "Oxymetazoline Inhibits Adenylate Cyclase by Activation of Serotonin-1 Receptors in an Established Renal Epithelial Cell Line." **D. J. Meyer**, physiology, won third place for the presentation, "Comparable Elevation in Microvessel Water Conductivity by Sodium Nitroprusside and Atrial Natriuretic Peptide."

Washington University

■ **Pedro Cuatrecasas, M.D.**, senior vice president of research and development at Glaxo Inc., delivered the 11th annual *Oliver H. Lowry Lecture in Pharmacology* May 12 at Washington University School of Medicine in St. Louis.

Cuatrecasas discussed the role of phosphoinositolglycans in membrane anchoring and action of insulin. Cuatrecasas, world renowned for his research on hormone-receptor interactions and cell communication, has been with Glaxo since 1986. He was vice president of research and director of the Burroughs Wellcome Company for 11 years, and from 1970-75 was director of the Division of Clinical Pharmacology at the Johns Hopkins University.

He received his bachelor's degree Phi Beta Kappa and medical degree magna cum laude, Alpha Omega Alpha from Washington University. He completed an internship and residency in internal medicine at the Johns Hopkins University followed by postdoctoral training at the National Institutes of Health.

Cuatrecasas has received numerous distinguished awards, including the John Jacob Abel Prize in Pharmacology, Eli Lilly Award of the American Diabetes Association, Goodman and Gilman Award and election to the National Academy of Sciences.

The Lowry Lecture is sponsored by the Department of Pharmacology to honor **Oliver H. Lowry, M.D., Ph.D.**, distinguished professor and lecturer. Lowry served as head of the department from 1947-76 and as dean of the School of Medicine from 1955-58. As a member of numerous national scientific committees, Lowry widely influenced research in medical science, particularly in the areas of neurobiology, neurochemistry, mental retardation and analytical biochemistry.

St. Louis University

■ The National Science Foundation has awarded **Duane P. Grandgenett, Ph.D.**, professor of molecular virology at St. Louis University School of Medicine, a three-year, $210,000 grant to study various animal retroviruses.

Similar human retroviruses appear to be responsible for several rare cancers. Other human retroviruses also cause AIDS. Dr. Grandgenett is investigating the structure of various enzymes necessary for replication of these viruses.

Dr. Grandgenett has been at St. Louis University Medical Center's Institute for Molecular Virology for the past 18 years. He earned his doctorate in 1970 from the University of Iowa in Iowa City.

■ **Moustapha Barghouti, M.D.**, and **Joumana Odeh, M.D.**, members of the executive board of the Union of Palestinian Medical Relief Committees (UPMRC), spoke on "Health Services in Jerusalem, the West Bank and Gaza Strip in the Context of the Current Crisis," on March 2, at St. Louis University School of Nursing.

Dr. Barghouti practices internal medicine at the Makassad Hospital in Jerusalem. Dr. Odeh practices pediatrics at a clinic operated by the Arab Women's Society in Jerusalem. Both doctors are members of the Physician's Union on the West Bank and are certified to practice medicine by the Jordan Medical Society.

The UPMRC was founded in 1980 to create a health care infrastructure to provide primary health care to impoverished Palestinians living in the villages, refugee camps and cities on the West Bank and Gaza Strip.

Dr. Barghouti and Dr. Odeh visited St. Louis University Medical Center as part of a nationwide lecture tour during March. The lecture was co-sponsored by St. Louis University's department of community medicine; the graduate major in community health nursing; and the Center for Health Services Education and Research.

■ **Harold L. Kennedy, M.D., M.P.H.**, chief of the division of cardiology at St. Louis University School of Medicine, was recently elected "Outstanding Alumnus" to Alpha Omega Alpha, a national medical honor society. He was chosen by the Gamma Chapter at the University of Missouri School of Medicine.

Dr. Kennedy was honored April 20 and 21 at the Alpha Omega Alpha Recognition Day at the University of Missouri-Columbia. He made Professor's Rounds and later Grand Rounds on the topic of "Premature Ventricular Contractions (PVC) — to treat or not to treat."

The division of cardiology at St. Louis University Medical Center has expanded significantly in recent years in the area of cardiovascular services and excelled in research and academic accomplishment. Medical center cardiologists are recognized as national leaders in preventive cardiology, percutaneous transluminal angioplasty and the study of TPA in the multicenter TIMI trial. Under Dr. Kennedy's leadership the division has also been in the national forefront for its research in Holter monitoring cardiac arrhythmias.

Dr. Kennedy received his medical

degree from the University of Missouri School of Medicine in 1964 and trained in internal medicine and cardiology at the University of Michigan and St. Georges Hospital in London, England. He later received a masters of public health degree in epidemiology and preventive medicine from Johns Hopkins School of Hygiene and Public Health in 1977.

Dr. Kennedy has published chapters in 12 books, authored one textbook, more than 200 abstracts and manuscripts and has presented scientific data at 200 national and international presentations. He is internationally known for his cardiology research in ambulatory (Holter) electrocardiography, cardiac arrhythmias, silent myocardial ischemia and sudden death.

■ St. Louis University Medical Center's first *John F. Schweiss, M.D., Lecture in Anesthesiology* was given by **Emmanuel M. Papper, M.D.,** on April 22.

Dr. Schweiss, professor and director of anesthesiology in the department of surgery at the medical center, trained in anesthesiology at Columbia Presbyterian Medical Center in New York when Dr. Papper was professor of anesthesiology and departmental chairman at Columbia. Dr. Papper is now dean emeritus and professor of anesthesiology, University of Miami School of Medicine.

Dr. Papper discussed "Doing Right, Not Being Right."

Dr. Schweiss received his medical degree from St. Louis University School of Medicine in 1948 and was named an assistant in surgery in 1952. In 1960, he was named chief of anesthesiology at The University Hospital, and in 1963 he became professor and director of the section of anesthesiology in the school of medicine.

Dr. Papper, a former president of the American Society of Anesthesiologists, has also served on the executive committee and as vice president of the World Federation of Societies of Anesthesiologists. He has been a visiting professor and lecturer at universities in England, Switzerland, Japan, Panama, South Africa, Finland, Denmark, Philippines, West Germany, Spain, China, the Netherlands, Belgium and throughout the United States.

University of Missouri-Kansas City

■ Three faculty members' promotions become effective Sept. 1, 1988. **Harry Gibbs, M.D.,** and **Jane Knapp, M.D.,** were approved for promotion to associate professor, and **James V. Spotts, Ph.D.,** was approved for promotion to professor. Dr. Gibbs is a docent and member of the Internal Medicine staff (Cardiovascular Disease) at the Medical School and Truman Medical Center; Dr. Knapp is in Emergency Health Services at The Children's Mercy Hospital; and Dr. Spotts is a UMKC Psychology professor with a Medical School faculty appointment.

■ **Marjorie Sirridge, M.D.,** professor and assistant dean for Curriculum, was featured in the April issue of *The New York Times Magazine* in an article titled, "Are Women Better Doctors?" The article also included quotes and photographs from two UMKC graduates, **Linda Dorzab, M.D.,** '84, and **Nevada Mitchell, M.D.,** '79.

■ An article by **Howard Rodenberg, M.D.,** appeared in the "A Piece of My Mind" section of the April 1, 1988 *Journal of the American Medical Association.* Dr. Rodenberg, whose article was titled "Unpublishable Results," is a 1986 graduate who currently is a resident in Emergency Health Services at Truman Medical Center.

■ Medical student **Raj TerKonda** is a recipient of the national Phi Kappa Phi scholarship award. Only one nominee can be named from each participating university campus, and Mr. TerKonda received the award in a competitive national pool of candidates for the $6,000 scholarships.

■ The 86 members of the school's 16th graduating class accepted their diplomas and recited the Oath of Physicians May 27 in Kansas City's Midland Theater. Commencement activities were highlighted by an alumni reunion and scientific seminar, the second meeting of the *Edward J. Twin, M.D., Memorial Society,* with noted bioethicist **Edmund Pellegrino, M.D.,** as keynote speaker. Another graduation tradition was marked by the annual *Carl Migliazzo Memorial Lecture,* this year presented by **Hugh Stephenson, M.D.,** who spoke on "The Truth about American Medicine's First Nobel Prize." Dr. Stephenson, who currently is interim dean at the University of Missouri-Columbia School of Medicine, also is chief of staff of the UMC Hospital and Clinics and the John A. Growdon Distinguished Professor of Surgery.

■ The Medical School's second annual Student-Faculty Research Day was labeled a success, with active contingents of students presenting their work, and faculty members displaying poster sessions. The event was highlighted by a presentation by keynote speaker **Paul Steele, M.D.,** a 1978 UMKC graduate who currently is a research fellow in the Division of Infectious Disease at Washington University in St. Louis.

Student awards were another key feature of the event: the grand prize for a student paper went to **Charles Carey** and first runner-up in this category was **Matthew Sutton.** Additional prizes went to five students for the quality of their presentations. They were: **Scot Ebbinghaus, Edward Koo, John McKenzie, David Park,** and **Randolph Robinson.**

■ The National Fund for Medical Education (NFME) recently selected the Medical School as one of five model educational programs for medical educators to visit. The NFME offers grants and matching grants to faculty members who wish to learn about educational innovations. UMKC workshops will focus on the school's Quarterly Profile Exam system, and on its admissions and assessment process, which identifies high-school seniors who have the academic and personal characteristics to become successful in medical school and to become competent, caring physicians. Workshops will be offered at various times during the next year.

■ Truman Medical Center, the primary teaching hospital for the Medical School, in May sponsored the first international conference of recognized authorities working in the area of Doppler assessment. The idea for the meeting came from the International Perinatal Doppler Society, a group that **Dev Maulik, M.D.,** professor and vice chairman of the Department of Obstetrics/Gynecology, helped found in 1986. The meeting's main purpose was to provide an international exchange of information on obstetrical application of advanced Doppler ultrasound.

■ The Eye Foundation of Kansas City on June 12 will hold its second annual Sight-a-thon, a 5K run to benefit the not-for-profit Eye Foundation, which is affiliated with Truman Medical Center and the Medical School. The first event was highly successful, with more than 600 runners participating.

Final Disciplinary Actions

At the February 19-20, 1988 meeting of the State Board of Registration for the Healing Arts, the following final disciplinary actions were taken. In addition, the listing includes all reportable actions finalized since the December 5, 1987 meeting that were not included in the first published listing (pg. 111, February 1988 Missouri Medicine). This information is made available to the public under the provisions of Section 334.101 RSMo.

■ **WILLIAM E. BROWN JR., D.O.,** *Catoosa, Oklahoma*
Order dated December 22, 1987. Ninety day suspension and reinstated on three years probation.
Violation: RSMo. 334.100.2(5) (8)

■ **SETH PASKON, M.D.,** *Salem, Missouri*
Order dated April 1, 1988. Three years probation.
Violation: RSMo. 334.100-2(13)

■ **WALTON BYRD, M.D.,** *Salem, Oregon*
Order dated January 16, 1988. Placed on indefinite probation. Violation: RSMo. 334.100.2

■ **JOSE TEMPORAL, M.D.,** *St. Louis, Missouri*
Order dated February 1, 1988. Thirty day suspension and reinstated on five years probation.
Violation: RSMo. 334.100-2(13)

■ **MICHAEL BLANK, M.D.,** *DeSoto, Missouri*
Order dated February 29, 1988. Surrendered controlled substance authority.
Violation: 4 CSR 150-5.010

■ **STEVEN BIETERMAN, M.D.,** *Tucson, Arizona*
Order dated March 28, 1988. Revocation of Missouri license.
Violation: RSMo. 334.100-2(5)

■ **JERRY HOFFMAN, M.D.,** *Barrington, Rhode Island*
Order dated March 28, 1988. Revocation of Missouri license.
Violation: RSMo. 334.100-2(2)

■ **CHARLES D. LAKE, D.O.,** *Phoenix, Arizona*
Order dated March 24, 1988. Revocation of Missouri license.
Violation: RSMo. 334.103

■ **CARL LEDBETTER, D.O.,** *Kearney, Missouri*
Order dated April 18, 1988. One month suspension, five years probation.
Violation: RSMo. 334.100-2(4) (i)

■ **OWEN WOODWARD, D.O.,** *Atlanta, Missouri*
Order dated March 29, 1988. Thirty day suspension, three years probation.
Violation: 4 CSR 150-5.010

■ **MARK FISHTEIN, D.O.,** *Pottstown, Pennsylvania*
Order dated May 12, 1988. Suspension of Missouri license, suspension stayed on condition that he not practice medicine without appearing before the Board.
Violation: RSMo. 334.100-2(24)

■ **JOSEPH BURNETT, D.O.,** *Salem, Missouri*
Order dated February 3, 1988. Surrendered controlled substance authority.
Violation: 4 CSR 150-5.010

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Cipro® is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below

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Skin and Skin Structure Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella morganii, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis,* and *Streptococcus pyogenes.*

Bone and Joint Infections caused by *Enterobacter cloacae, Serratia marcescens,* and *Pseudomonas aeruginosa*

Urinary Tract Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus mirabilis, Providencia rettgeri, Morganella morganii, Citrobacter diversus, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus epidermidis,* and *Streptococcus faecalis*

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri*;* and *Shigella sonnei** when antibacterial therapy is indicated

*Efficacy for this organism in this organ system was studied in fewer than 10 infections

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro® may be initiated before results of these tests are known, once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN The oral administration of ciprofloxacin caused lameness in immature dogs Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION)

PRECAUTIONS

General

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS)

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided The recommended daily dose should not be exceeded Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION)

Drug Interactions

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired, concurrent administration of these agents with ciprofloxacin should be avoided

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum This should be considered if patients are receiving both drugs concomitantly

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential If superinfection occurs during therapy, appropriate measures should be taken

Information for Patients

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination

Carcinogenesis, Mutagenesis, Impairment of Fertility

Eight *in vitro* mutagenicity tests have been conducteu with ciprofloxacin and the test results are listed below:

Salmonella/Microsome Test (Negative)
E. coli DNA Repair Assay (Negative)
Mouse Lymphoma Cell Forward Mutation Assay (Positive)
Chinese Hamster V_{79} Cell HGPRT Test (Negative)
Syrian Hamster Embryo Cell Transformation Assay (Negative)
Saccharomyces cerevisiae Point Mutation Assay (Negative)
Saccharomyces cerevisiae Mitotic Crossover and Gene Conversion Assay (Negative)
Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

Rat Hepatocyte DNA Repair Assay
Micronucleus Test (Mice)
Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed

Pregnancy – Pregnancy Category C:

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY I IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

Nursing Mothers

It is not known whether ciprofloxacin is excreted in human milk, however, it is known that ciprofloxacin i excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk Because of this and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision shoul be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to th mother.

Pediatric Use:

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SE WARNINGS)

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated During clinical investigation, 2,799 patients received 2,868 courses o the drug Adverse events that were considered likely to be drug related occurred in 7 3% of courses, possibl related in 9 2%, and remotely related in 3 0% Ciprofloxacin was discontinued because of an adverse event i 3.5% of courses, primarily involving the gastrointestinal system (1 5%), skin (0.6%), and central nervous syste (0 4%)

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomitin (2 0%), abdominal pain/discomfort (1.7%), headache (1 2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below Those typical o quinolones are italicized

GASTROINTESTINAL *(See above)*, painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation gastrointestinal bleeding

CENTRAL NERVOUS SYSTEM. *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness malaise, anorexia, phobia, depersonalization, depression, paresthesia*

SKIN/HYPERSENSITIVITY *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum.

SPECIAL SENSES: *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste*

MUSCULOSKELETAL *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout.

RENAL/UROGENITAL *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis

CARDIOVASCULAR palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis

RESPIRATORY epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin

Adverse Laboratory Changes Changes in laboratory parameters listed as adverse events without regard to drug relationship

Hepatic – Elevations of ALT (SGPT) (1 9%), AST (SGOT) (1.7%), alkaline phosphatase (0 8%), LDH (0.4%), serum bilirubin (0.3%)

Hematologic – eosinophilia (0 6%), leukopenia (0.4%), decreased blood platelets (0 1%), elevated blood platelets (0 1%), pancytopenia (0 1%).

Renal – Elevations of: Serum creatinine (1.1%), BUN (0 9%).

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED.

Other changes occurring in less than 0 1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment Adequate hydration must be maintained In the event of serious toxic reactrons from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION)

HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION)

CONVENIENT *B.I.D.* DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
Respiratory Tract* Bone and Joint* Skin/Skin Structure*	Mild/Moderate	500 mg *B.I.D*
	Severe/Complicated	750 mg *B.I.D*
Urinary Tract*	Mild/Moderate	250 mg *B.I.D*
	Severe/Complicated	500 mg *B.I.D*
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg *B.I.D*

---

* **Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

For further information, contact the Miles Information Service: 1-800-642-4776. In VA. call collect: 703-391-7888.

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Physician's Recognition Awards

Twenty-five MSMA members qualified for the MSMA-AMA Physician's Recognition Award during April 1988.

The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Audrain

Nancy Bunge, *Mexico*

Boone

William B. Pingelton, *Columbia*

Bulter-Wayne-Ripley-Carter

Chul Kim, *Poplar Bluff*
Gene H. Leroux, *Doniphan*
Bennie N. Till, *Poplar Bluff*
Kirby L. Turner, *Poplar Bluff*

Cape Girardeau

Carl F. Ritter, *Cape Girardeau*

Greene

Martin H. Boone, *Springfield*
Albert P. Simpson, *Springfield*
Arlen D. Winsky, *Springfield*

Jasper

Orville A. Mehaffy, *Joplin*

Metro Med of Greater Kansas City

McPherson S. Beall, *Kansas City*
Frances S. Brown, *Independence*
Theodore C. DeFeo, *Kansas City*
Marie A. Delcambre, *Kansas City*
Jack Edmisten, *Independence*
Karl H. Hanson, *Kansas City*
Brian E. Healy, *Kansas City*
Daniel L. Schlozman, *Kansas City*
Charles K. Whittaker, *Kansas City*

Northwest

Desmion M. Dizney, *Maryville*

St. Louis Metropolitan

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In Memoriam

■ **Harold D. Adams,** M.D., died February 15, 1988 at the age of 55. Dr. Adams, a pediatrician, practiced medicine in Columbia for 10 years before retiring due to a heart condition. He served in the U.S. Air Force for 10 years before entering medical school. He obtained his medical degree at the University of Missouri-Columbia in 1965. Dr. Adams was a member of the Boone County Medical Society.

■ **John T. Crowe,** M.D., died February 25, 1988 at the age of 69. Dr. Crowe, a family practitioner, practiced medicine in Cape Girardeau for 37 years before retiring in June 1985. He obtained his medical degree at Duke University Medical School in 1943. He served in the Army in Europe from 1946 to 1948. Dr. Crowe later worked as head of the surgery department at an Air Force Hospital. In 1948 he came to Cape Girardeau and started his practice. He was an avid pilot and airplane enthusiast. Dr. Crowe was a member of the Cape Girardeau County Area Medical Society.

■ **John D. DeMott,** M.D., died April 27, 1988 at the age of 74. Dr. DeMott, a psychiatrist, practiced privately in Kansas City from 1947 to 1979. He retired that year and moved to Sebring, FL. He obtained his medical degree at the University of Kansas Medical School in 1939. Dr. DeMott was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Willard Ellsworth,** M.D., died March 20, 1988 at the age of 98. Dr. Ellsworth, a general practitioner, practiced medicine in New York City from 1929 to 1955. He moved to Cainsville, Mo., and opened a medical practice in 1955. He retired in 1975. Dr. Ellsworth was an Army veteran of World War I where he worked in chemical warfare research. He obtained his medical degree at the New York University Medical School in 1927. Dr. Ellsworth was a member of the Grand River County Medical Society.

■ **Joseph E. Flynn,** M.D., died April 18, 1988 at the age of 71. Dr. Flynn, a general surgeon, practiced medicine for more than 40 years and served on the staffs of St. John's Mercy Medical Center, St. Mary's Health Center in Richmond Heights and the old city and county hospitals. He also served on the faculty of St. Louis University Medical School. He obtained his medical degree at St. Louis University in 1941. Dr. Flynn was a member of the St. Louis Metropolitan Medical Society.

■ **Joseph C. Jaudon,** M.D., died April 15, 1988 at the age of 83. Dr. Jaudon, a pediatrician, practiced medicine for 50 years in St. Louis and served on the staffs of St. Louis Children's Hospital, Barnes Hospital and Deaconness Hospital, St. Mary's Health Center and St. Luke's. He also served as pediatric adviser to Shriners Hospital for Crippled Children in Frontenac and medical adviser to the Children's Home Society of Missouri. He obtained his medical degree at Washington University in 1933. Dr. Jaudon was a member of the St. Louis Metropolitan Medical Society.

■ **Thomas F. Maher, Jr.,** M.D., died April 6, 1988 at the age of 63. Dr. Maher, a radiologist, became chairman of the radiology department at St. John's Mercy Medical Center in Creve Coeur in 1968. In 1982 he was appointed chairman of the radiology department at St. John's Mercy Hospital in Washington. He served as a clinical professor at the St. Louis University School of Medicine since 1978. He obtained his medical degree at the St. Louis University School of Medicine in 1948. Dr. Maher was a member of the St. Louis Metropolitan Medical Society.

■ **Elmer H. Rainwater,** M.D., died March 19, 1988 at the age of 89. Dr. Rainwater, an ophthalmologist, practiced medicine in Springfield. He obtained his medical degree at the Washington University School of Medicine in 1928. Dr. Rainwater was a member of the Greene County Medical Society.

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

June

9-10 **Patient Development** — Location: Stouffer Concourse Hotel, St. Louis. Contact: Barry Kling, University of Missouri-Columbia, CME Office, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

10-11 **"7th Annual Glennon Update Medical Genetics and Pediatric Cardiology"** — Location: Marriott Pavilion Hotel, St. Louis. Contact: Mary Hummert, Educational Coordinator, Room 202, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5638.

16-18 **AIDS and Infectious Disease Update** — Location: Hilton Resort, South Padre Island, Texas. Contact: Scott & White CME Office, 2401 South 31st St., Temple, TX 76508. 817/774-2350.

18-23 **Allergy: Back to the Basics in the Tetons** — Location: Jackson, WY. Contact: Missouri Postgraduate Course in Allergy, Inc., 24-26 S. Main St., Suite A, Liberty, MO 64068. 816/781-0902.

20-23 **1st International Symposium on Orbital Plastic Surgery** — Location: St. Francis Hotel, San Francisco. Contact: Plastic Surgery Educational Foundation, 444 E. Algonquin Road, Arlington Heights, IL 60005. 312/228-9900.

25-27 **Advanced Cardiac Life Support Provider Course** — Location: St. Louis University Medical Center, Learning Resources Center. Contact: Anita Herbst, CME coordinator, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

July

1-5 **Family Practice Board Review** — Location: Hanalei Hotel, San Diego, CA. Contact: CME Office, University of California-San Diego School of Medicine, M-017, La Jolla, CA 92093. 619/534-3940.

21-23 **Clinical Allergy for the Practicing Physician** — Location: Washington University Medical Center, St. Louis. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

August

26 **2nd Annual Rusk Lectureship in Physical Medicine and Rehabilitation** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

September

1-2 **Respiratory Emergencies: A Multidisciplinary Approach** — Location: Doubletree Hotel, Overland Park, KS. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS 66103. 913/588-4488.

14-15 **Endocrine Function and Aging** — Location: Clarion Hotel, St. Louis. Contact: Symposium Secretary, VA Medical Center, GRECC (111G-JB), St. Louis, MO 63125. 314/894-6510.

15-16 **The Second International Vaginal Surgery Conference** — Location: Adam's Mark Hotel, St. Louis, MO. Contact: Pat Daniels, Medical Administrator, St. John's Mercy Medical Center, 621 S. New Ballas, Suite 7011, St. Louis, MO 63141. 314/991-0441.

17 **Primary Rheumatology** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

October

14-15 **31st Annual Physicians Alumni Weekend** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

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Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

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Contraindications: *Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.*

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. *If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake.* ***Associated widened QRS complex or arrhythmia requires prompt additional therapy.*** *Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.*

Precautions: *The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin[ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.*

Adverse Reactions: *Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.*

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

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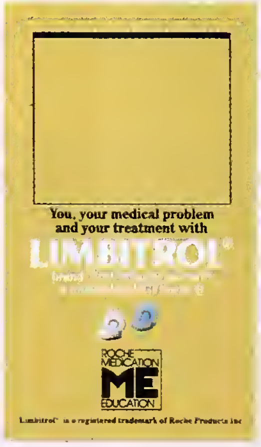
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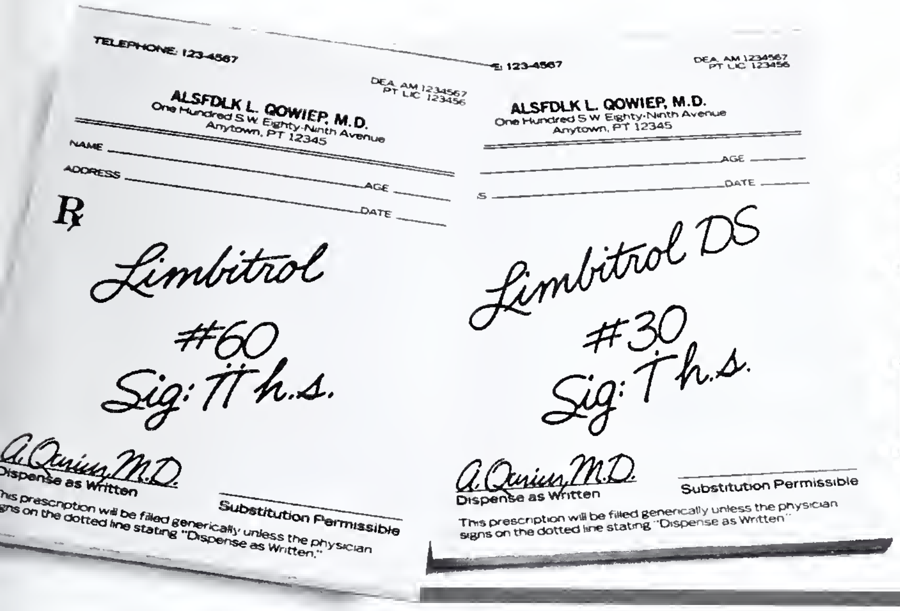

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Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓒⅳ

Limbitrol® DS

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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

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Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively.
I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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- First-week reduction in somatic symptoms

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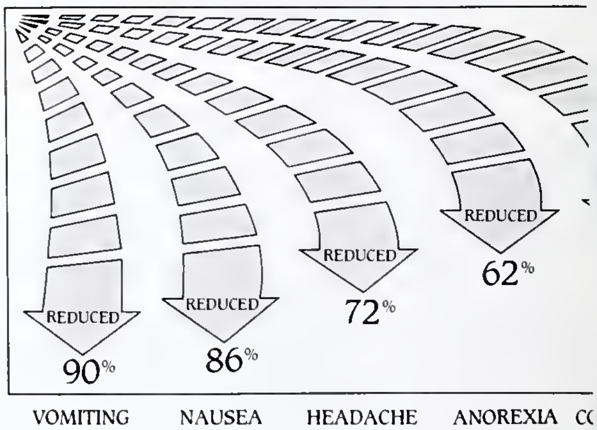

*Patients often presented with more than one somat

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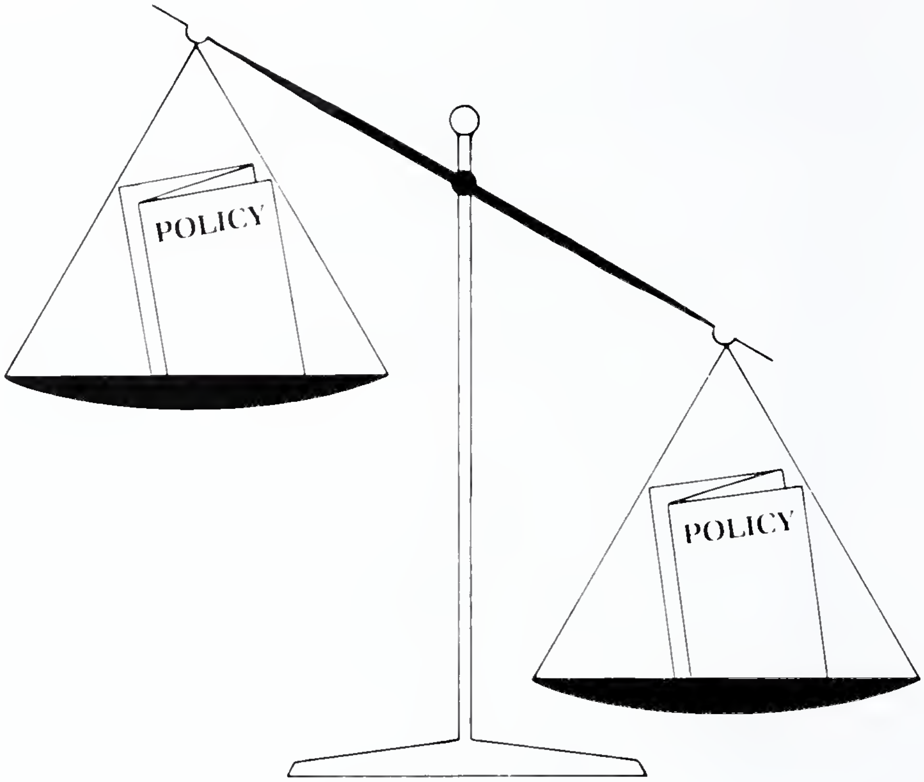

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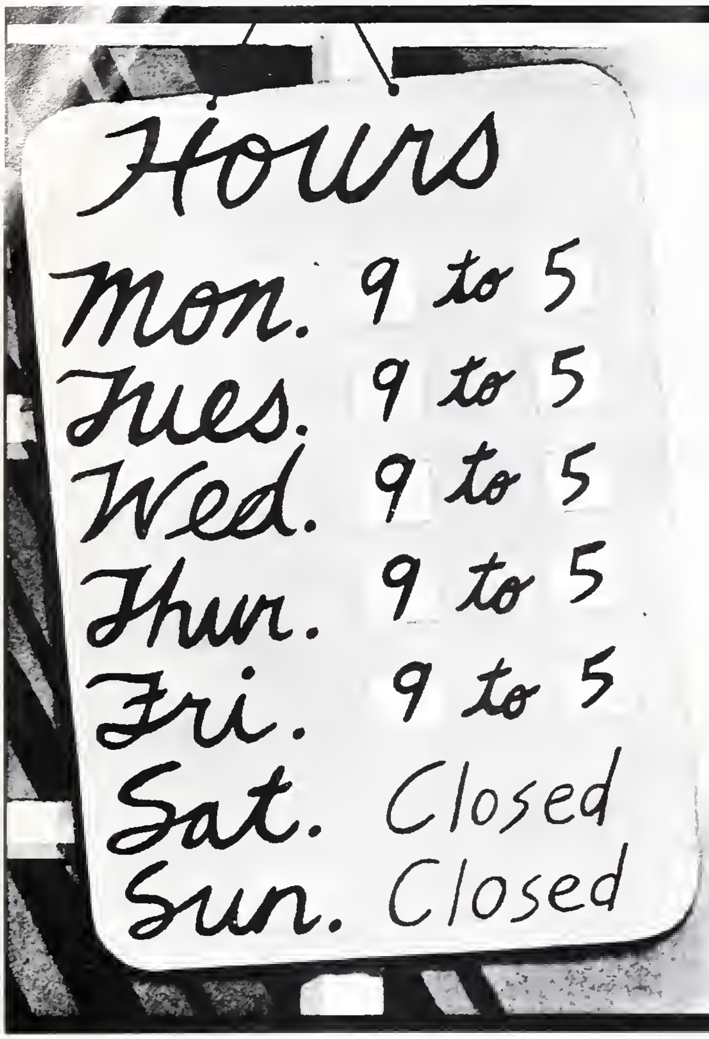

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MOSERS Medical Care Plan changes

Beginning July 1, 1988, the Missouri State Employees' Retirement System (MOSERS) Medical Care Plan will implement a hospital pre-certification program for non-emergency admissions. The Blue Cross office in St. Louis will handle the program. Pre-certification for all non-emergency admissions will be obtained by calling the Referral Center in St. Louis. The call may be placed by the MOSERS' employee or a member of the family, the physician or nurse or a hospital representative.

The program will utilize only registered nurses to respond to the admission requests. Physician specialists on site will also be available for referral and consultation. The phone numbers for the Referral Center are:

1-800/992-5498 or
314/658-4221

With escalating costs, MOSERS is using the pre-certification program to determine if appropriate care could be provided safely in a more cost-efficient setting. New identification cards will be issued with the pre-certification requirement indicated on the front along with the phone numbers. ■

MOMEDICO report

At the annual shareholders meeting in May, David Bounk, Executive Vice President of MOMEDICO, the MSMA-sponsored professional liability carrier, summarized the achievements of the company.

- 1987 was the most productive year for increasing the number of insured physicians since 1981. Coverage now is provided to more individual physicians than ever in the history of MOMEDICO.
- MOMEDICO was able to affect its lowest rate increase since 1982.
- Claims frequency remained under control. A total of only two more claims were reported in 1987 than 1986. This can be traced to a combination of better underwriting and the effect of Senate Bill 663. This favorable trend continues in the first quarter of 1988 with new claims down by 12% from 1987.
- The company negotiated its most favorable reinsurance treaty since 1984. The coverage available, the cash flow on ceding premiums and the profit contingency for MOMEDICO all improved.
- Other operating expenses showed their lowest dollar increase in several years and are down to a respectible 8.7% of net written premiums versus 9.9% in 1986 and 11.4% in 1985. Based upon the current budget, operating expenses should lower to near 7% for 1988.
- Total allocated loss adjustment expenses paid in 1987 increased only 2% over 1986 and that portion paid to attorneys was actually reduced by 7%. The increase overall came primarily from interest paid to appeal several cases. This comes as a direct result of efforts of our in-house claim staff to control expenditures while providing the best possible defense.
- There is increased interest on the part of physicians in risk control programs. This is extremely important in any long-term solution to the current medical professional liability dilemma. ■

May Council highlights

The MSMA Council met May 21 at the Inn at the Grand Glaize in Osage Beach. Highlights of the meeting include:

- Meeting dates and hotels were selected for future MSMA Annual Conventions. The 131st Annual Convention will be April 13-16, 1989 at the Marriott Pavilion Hotel in St. Louis. Tan-Tar-A at Lake of the Ozarks will be the location for the 132nd convention April 5-8, 1990. In 1991, Crown Center in Kansas City will host the 133rd convention April 3-7.
- More than 90% of MSMA members have paid their dues for 1988. A non-member solicitation will be mailed in August. Boone County offered credit card payment for 1988 dues through a pilot project; only three members used this system. AMA offered installment payments for 1988 with only 20 MSMA members using this plan. However, the Council voted to continue the installment payment option for one more year.
- MSMA is still organizing the Young Physicians Committee.
- At the request of the Board of Registration for the Healing Arts, the Council approved of the Association assisting the State Board in reviewing the operation of HMOs, PPOs and other managed health care providers. Our efforts will help the State Board form a policy for investigating these organizations.
- The Council approved the following definition of "practice of medicine" as promulgated by the State Board:

"The practice of medicine is defined as diagnosing, treating, operating, advising, recommending, prescribing and dispensing for any human sease, pain, injury, deformity, hysical or mental condition or the prevention thereof, for compensation.

"The practice of medicine also includes any activity that licensure to practice uniquely qualifies its holder to perform, including, but not limited to, activity in any aspect of peer review or activity in an administrative capacity an essential element of which is the reliance on education as a physician in making judgments or decisions."

- On April 13, MSMA objected to a Division of Medical Services proposed rule concerning payment of crossover claims: Medicaid patients who have some Medicare coverage. We were informed that our objections were not filed in a timely fashion; however we were able to obtain a hearing before the Administrative Rules Committee. Testimony before this Committee by the Medicaid officials indicated this rule was not mandated in HCFA and that our comments had been filed on time. The proposed rule was withdrawn May 9.
- The Council received a report from the May 4 meeting of the Committee to Preserve Health Care. Dealing with liability costs for OBs is the top priority of the group for the coming year in addition to these items:

Abolish joint and several liability
Create a reasonable structure of limitations
Abolish the collateral source rule
Re-institute pre-trial screening panels
Seek a flat $250,000 cap on non-economic losses (tied to changes in joint and several liability)

- Dr. Cooper discussed the Association's efforts with the MedAssist Program, a state tax-funded insurance program for the medically indigent, for employees without health insurance and others not covered by Medicare and Medicaid. Although MedAssist failed in the state legislature, an initiative petition drive is underway to place it on the November ballot. The Missouri Hospital Association wants MSMA support and financial assistance. The Council discussed contributing $50,000 but tabled the motion until the August Council meeting so that they may study the results of our own Medicaid survey. The MSMA office will send a copy of the petition, a copy of the constitutional amendment and a cover letter explaining the proposal and how members may become involved.
- A report from the May 6 Executive Committee meeting was presented and approved. Of interest, **Resolution 40** *Potential Toxic Contamination of the Missouri River* was reviewed by the Committee along with the memo from Dr. Dyer, a letter from Dr. Lee, and a copy of Cork Swarens' letters to the states of Missouri and Kansas. Either Missouri's Department of Natural Resources or Governor Ashcroft would be corresponding with the Governor of Kansas regarding this issue. Plus the Kansas General Assembly was concerned about the landfill.

Recommendation: The Executive Committee decided to wait until the correspondence between the states is available before deciding upon **Resolution 40.** *Note:* The May 11 *Kansas City Star* mentioned that Governor Hayden of Kansas vetoed legislation that would have prevented the Quindaro community in Kansas City, KS from becoming a landfill and that work on the landfill is expected to begin this summer.

- Mr. Swarens presented the report of the Committee on Legislative Affairs. He explained the benefits of creating a committee composed of physicians and pharmacists to discuss mutual concerns. The Council authorized the appointment of such a committee.
- Dr. Bradshaw presented the PRO report. He said the renewal proposal for the HCFA contract has been submitted and his office will find out if their bid is competitive by June 30; the Foundation's current contract has been extended two months to September 30. The Council approved Dr. Bradshaw's request to extend the current voluntary reviewers for two-months until September 30.
- Council Chairman Gary Dyer, M.D. named the following Councilor Advisors to the standing MSMA Commissions: Commission on Medical-Legal Affairs — David Wilkinson, M.D.; Commission on Continuing Education — Raymond Caffrey, M.D.; Commission on Medical Economics — A. J. Campbell, M.D.; Commission on Public Affairs — Jerry Murrell, M.D., and Commission on Interspecialty Medicine — David Hall, M.D.
- The Council approved the name change as recommended by the Physician Rehabilitation Committee to Missouri Physicians' Health Program (MPHP). The new director is Jack Croughan, M.D. and JoAnne Hodgman is the program coordinator. In addition, the MPHP requested that MSMA delete the function of the primary treatment for physicians enrolled in the Monitored Treatment Program. MPHP promoted that they should become a sophisticated Employer Assistance Program (EAP). In such programs, the people running and supporting the program are not actively involved in treatment as a primary function. Previously MSMA provided direct group treatment and charged a fee for the service. Removing this aspect of the program eliminates the inherent conflict. The Council approved deleting primary treatment of

physicians as a function of the MPHP.

- The Council discussed the MSMA Strategic Plan.

The next Council meeting will be August 26-27 at the Capitol Plaza Hotel in Jefferson City. ■

Medicare Workshops scheduled

MSMA is sponsoring workshops by Conomikes and Associates titled "Medicare Update 1988: How to Do It Right." The dates and locations are:

August 2 — Henry VIII Conference Center, 4690 N. Lindbergh Blvd., St. Louis
August 3 — University Plaza Hotel, 330 John Q. Hammons Parkway, Springfield
August 4 — Holiday Inn Executive Center, 2200 I-70 Drive S.W., Columbia
August 5 — Hilton Plaza Inn, 45th & Main, Kansas City, MO

You may register for this informative seminar by contacting the MSMA office, P.O. Box 1028, Jefferson City, MO 65102, 314/636-5151. The complete registration fee is $85.00. ■

From left, Larry G. Piepergerdes, M.D., 1987-88 MSMA president; Gary A. Dyer, M.D., MSMA Council chairman; Rep. Tom Coleman, U.S. 6th District Congressman; and Richard Bowles, M.D. surround Margaret Piepergerdes at the Auxiliary's Public Affairs Breakfast.

MISSOURI
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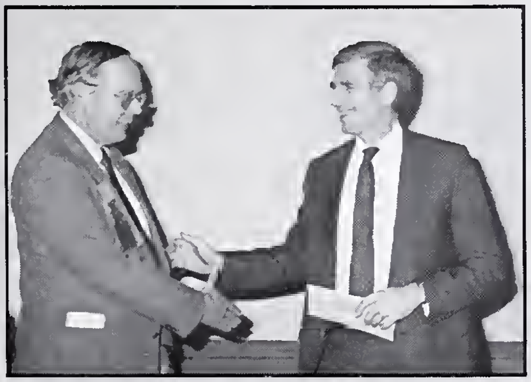
The panel discussion on "Death & Dying: The Ethical Issues" featured (from left) Ronald Youmans, M.D., moderator; Russell Patterson, M.D.; Susan Wolf, J.D.; and The Rev. Kevin O'Rourke, O.P.



Marvin Singleton, M.D., MSMA president-elect and MMPAC/AMPAC chairman, welcomes Sen. John Danforth (R-*Missouri*) to the 130th Annual Convention. Senator Danforth attended the SuperPAC luncheon, addressed the Auxiliary meeting, and conversed with numerous MSMA members during the day.

Joan Milburn, president of the Southern Medical Association Auxiliary, presents Mary Kay McPhee with a check for use with the AIDS education seminar Mrs. McPhee organized in Kansas City.

Missouri Department of Health
HIV ANTIBODY COUNSELING AND TESTING SITES

St. Joseph
St. Joseph/Buchanan Co. Health Dept.
904 S. 10th Street, (Patee Hall)
St. Joseph, MO 64503
Terri Dixon, R.N.
Phone: 816/271-4725

Kansas City
Kansas City Free Clinic
5119 East 24th Street
Kansas City, MO 64127
Randy Gould, Administrator
Phone: 816/231-8895

Independence
Jackson County Health Department
313 S. Liberty
Independence, MO 64050
Marilyn Burkett, R.N.
Phone: 816/881-4424

Marshall
Saline County Nursing Service
76 West Arrow
Marshall, MO 65340
Billie Vardiman, R.N.
Phone: 816/886-3434

Joplin
Joplin City Health Department
513 Kentucky Avenue
Joplin, MO 64801
June Tatman, R.N.
Phone: 417/623-6122

Springfield
Springfield/Greene County Health Dept.
227 E. Chestnut Expressway
Springfield, MO 64802
Maureen Miller, R.N.; Desa Beezley, R.N.
Phone: 417/864-1686

Cape Girardeau
Cape Girardeau Nursing Service
44 North Lorimer
Cape Girardeau, MO 63701
Charlotte Craig, R.N.
Phone: 314/335-7846

Macon
Macon County Health Department
1131 Jackson
Macon, MO 63552
Grace Osman, R.N.
Phone: 816/385-4711

Columbia
Columbia/Boone County Health Dept.
600 East Broadway
Columbia, MO 65205
Linda Hancik, R.N.
314/874-7355

Jefferson City
Cole County Health Department
210 Adams Street
Jefferson City, MO 65101
Ivah Braun, R.N.
Phone: 314/636-2181

Flat River
St. Francois County Health Department
1025 West Main Street
Flat River, MO 63601
Jane Hartrup, R.N.
Phone: 314/431-1947

Poplar Bluff
Butler County Health Department
1618 N. Main Street
Poplar Bluff, MO 63901
Vicky Sparkman, R.N.
Phone: 314/785-8478 or 8479

St. Louis
Magdala Foundation
4158 Lindell Blvd.
St. Louis, MO 63108
Gwen Whiteside
Phone: 314/652-6004

St. Louis City Division of Health
634 North Grand
St. Louis, MO 63178
Phone: 314/658-1054

St. Louis County Health Dept.
801 S. Brentwood Blvd.
Clayton, MO 63105
Phone: 314/854-6000

For more information, contact:
Missouri Department of Health
Bureau of AIDS Prevention
P. O. Box 570
Jefferson City, MO 65102
314/751-6438

Death & Dying

If you missed the panel that debated the medical, legal and moral ethics of this topic in Kansas City, now you can order the cassette tape of the General Session. Send a check for \$20⁰⁰ to:

MSMA Convention Tape
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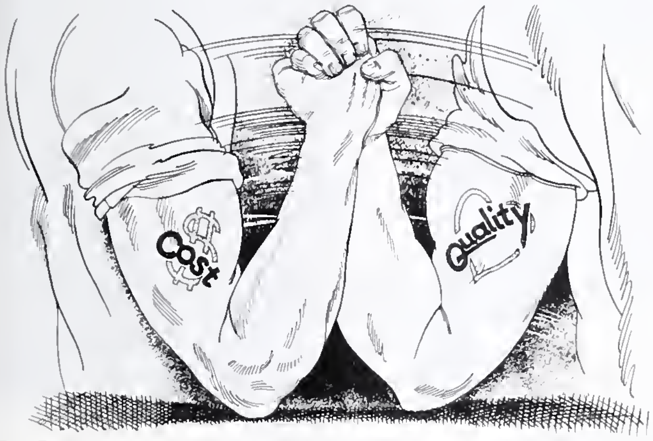
Jefferson City, MO 65102



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Brief Summary. Consult the package insert for prescribing information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h s after healing of an active duodenal ulcer The consequences of continuous therapy with Axid for longer than one year are not known

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists

Precautions: *General*—1 Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy

2 Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency

3 Pharmacokinetic studies in patients with hepatorenal syndrome have not been done Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations) The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus There are, however, no adequate and well-controlled studies in pregnant women It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats Pups reared by treated lactating rats had depressed growth rates Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups Age alone may not be an important factor in the disposition of nizatidine Elderly patients may have reduced renal function

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0 2%), urticaria (0.5% vs <0 01%), and somnolence (2 4% vs 1 3%) were significantly more common in the nizatidine group A variety of less common events was also reported, it was not possible to

Axid® (nizatidine, Lilly)

determine whether these were caused by nizatidine

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo Rare reports of gynecomastia occurred

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients Rash and exfoliative dermatitis were also reported

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported

Overdosage: There is little clinical experience with overdosage of Axid in humans If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively. PV 2091 AMP [041288]

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EDITOR'S DESK

Donald G. Sessions, M.D.

The dance is a powerful metaphor in the domain of relating to people.

Dancing

I walk into the examining room and greet her. She is tall, pretty and most of all young. She has had Hodgkins disease for four years and has been treated with irradiation and chemotherapy, and, presently, is in remission. She feels a lump in her throat and is concerned that it is a recurrence. Her symptoms have subsided in the last few weeks. I begin my examination. I am called to the phone for an "emergency."

It's the neurologist calling about our patient with advanced tongue cancer who had a spontaneous respiratory arrest last night and was resuscitated. The prognosis, he tells me, is worse than poor. He has a near-flat line EEG and there is no telling how long he will live if we continue his full life support systems. I thank him and consider what to tell the patient's wife and daughters.

I go back into the exam room. Where was I in the exam? Yes, I'd checked the ears and nose and was ready to examine the mouth. I make contact with her again. She's afraid she might have cancer of the throat. The exam shows no abnormal physical findings. I tell her. She remembers that she hasn't had her symptoms for several weeks. Her mood alters visibly. She smiles.

I see three more patients. Each has a unique issue. I am with each patient as if they were the only patient I had that day. I talk too long and get behind.

I have a completely unsatisfactory encounter with a new patient with headaches. She wants me to check into an abnormality on an x-ray. I listen to something else and we discuss her recent history of medical "non-compliance" (her words not mine). I finally hear her underlying concern and we have a minor breakthrough in communication. I am relieved. My body relaxes.

In the next room is the wife of a patient who is almost ready for discharge. She asks me if he's going to be alright. She doesn't like my answer and asks me again. We repeat this one more time. I finally hear the question under the question — will he ever be like he was before? She still doesn't like my answer but it is said with authenticity and she understands that he won't. We begin the process of arranging for home health support for her husband, despite the fact that he is hard-headed and doesn't want it.

If anything has changed through the years in my ability to interact with patients it is my increasing willingness to "dance" with them. The dance is a powerful metaphor in the domain of relating to people. Dancing is action which occurs in our bodies and our minds. We are usually aware when our body is "in step" or "out of step" in the dance whether we are doing a solo or dancing with someone else.

As our bodies dance there is a simultaneous dance in our minds. This can occur when we are dancing alone in a private conversation with ourselves or when we are dancing with another at which time we can be either in a private conversation or go "public" and speak with our partner.

Occasionally we will dance with many partners at the same time.

The quality of our dancing is difficult to observe when we are dancing alone. The conversation of a dance alone is a monologue, and assessing the quality of such a dance is challenging. Often the only way we can notice that the monologue is effective is seeing whether it results in action. It is more clear what is going on when we are dancing with someone else. We are usually aware when we are in a dialogue and we are not in step. This awareness lets us acknowledge the breakdown in the dance and allows for the possibility of identifying the issue or the issue under the issue. This produces the possibility of self-correction and being in a dance of coordination.

It is being in a dance with patients that allows the struggle and effort to dissolve and disappear. It is the sense that patients want to dance in coordinated action just as much as I do that results in our dancing together as a team. When I have had a full day of dancing with patients whether it be in step or out of step then I am energized. When I go home I am not exhausted. There is no burden — only a sense of dancing. When that occurs I can ask myself, with a sense of wonder, and without really knowing the answer — what is possible — what can be generated in dancing with people? ■

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130th Annual Meeting

MISSOURI STATE MEDICAL ASSOCIATION

House of Delegates

Hyatt-Regency Hotel
Kansas City, Missouri
March 17-20, 1988

FIRST SESSION

The First Session of the MSMA House of Delegates was called to order at 10:00 a.m., Thursday, March 17, 1988 by Speaker of the House Arlen D. Winsky, M.D. The following officers and delegates were present during the 130th Annual Convention:

OFFICERS

President	Larry G. Piepergerdes, *Kansas City*
President-Elect	T. J. Cooper, *St. Louis*
Vice-President	William C. Allen, *Columbia*
Secretary	Berry Ivy, *Springfield*
Treasurer	Jay Meyer, *St. Louis*
Speaker of the House	Arlen D. Winsky, *Springfield*
Vice-Speaker of the House	Jo-Ellyn M. Ryall, *St. Louis*
Immediate Past-President	H. Peter Ekern, *Mexico*

COUNCILORS

1st District	Gary A. Dyer, *St. Joseph*
2nd District	Robert V. Thompson, *Moberly*
3rd District	William H. Huffaker, *St. Louis*
3rd District	J. Otto Lottes, *St. Louis*
3rd District	Arturo Montes, *St. Louis*
3rd District	Frederick D. Peterson, *St. Louis*
3rd District	David Wilkinson, *St. Louis*
3rd District	Carol F. Williams, *St. Louis*
4th District	J. Michael Conoyer, *St. Charles*
5th District	Jerry Murrell, *Columbia*
5th District	Alan L. Braun, *Jefferson City*
6th District	A. J. Campbell, *Sedalia*
7th District	Raymond J. Caffrey, *Independence*
7th District	Frederick W. Hahn, *Kansas City*
7th District	Dorothy D. Reister, *Shawnee Mission, KS*
8th District	Marvin A. Singleton, *Joplin*
8th District	Francis M. Corry, *Springfield*
9th District	David O. Barbe, *Mountain Grove*
10th District	Melvin C. Kasten, *Sikeston*
Student	Dean Blakeley, *Columbia*
HMSS	Charles W. Barbee, *Columbia*

VICE COUNCILORS

1st District	Stephen Vilmer, *Shawnee Mission, KS*
2nd District	Carl R. Kruse, *Palmyra*
4th District	Sam L. Farrell, *Washington*
6th District	Jerry Meyer, *Concordia*
7th District	Mark W. Martin, *Lee's Summit*
8th District	David W. Hall, *Rogersville*
9th District	Thomas R. Stubbs, *West Plains*
10th District	William C. Shell, *Sikeston*
Student	Evan K. Saunders, *St. Louis*
HMSS	William H. Dorzab, *Kansas City*
RPS	Victoria Martin, *Shawnee Mission, KS*

DELEGATES

First District

Buchanan	Edward H. Andres, *St. Joseph*
Buchanan	Sidney Christiansen, *St. Joseph*
Buchanan	Richard K. Jacks, *St. Joseph*
Buchanan	Phyllis Roberts, *St. Joseph*
Buchanan	York E. Silliman, *St. Joseph*
Buchanan	Donald J. Stallard, *St. Joseph*
Clay-Platte	Donald A. Fakhoury, *Kansas City*
Clay-Platte	Mark E. Gordon, *Kansas City*
Clay-Platte	Stephen A. McCray, *N. Kansas City*
Clay-Platte	Weldon Sportsman, *Kansas City*
Clay-Platte	Stephen E. Vilmer, *Shawnee Mission, KS*
Clay-Platte	Patricia A. Young, *Gladstone*
Grand River	William Bouleware, *Chillicothe*
Grand River	Albert D. Cross, *Trenton*
Grand River	John Dixon, *Brookfield*
Northwest	Ed Bare, *Tarkio*
Northwest	Patrick B. Harr, *Maryville*

Second District

Chariton-Macon-Monroe-Randolph	C. C. Cohrs, *Moberly*
Chariton-Macon-Monroe-Randolph	J. Will Fleming, *Moberly*
Northeast	Daniel C. Cummings, *Memphis*
Northeast	Purificacion Florendo, *Hannibal*
Northeast	H. P. Jayanandaiah, *Hannibal*
Northeast	Edward Plowman, *Hannibal*

Third District

St. Louis	Luis B. Anglo, *St. Louis*
St. Louis	Matt H. Backer, Jr., *St. Louis*
St. Louis	Vernon H. Balster, *St. Louis*
St. Louis	M. Roman Banton, *St. Louis*
St. Louis	William C. Banton, II, *St. Louis*
St. Louis	Arthur E. Baue, *St. Louis*
St. Louis	Olga M. Blair, *St. Louis*
St. Louis	George Bohigian, *St. Louis*
St. Louis	Mary E. Case, *St. Louis*
St. Louis	Frank J. Catanzaro, Jr., *St. Louis*
St. Louis	Rudolph E. Catanzaro, *St. Louis*
St. Louis	James G. Coates, *St. Louis*
St. Louis	Harry O. Cole, *St. Louis*
St. Louis	Richard J. Dames, St. Louis

St. Louis	Donald J. Dickler, *St. Louis*
St. Louis	James E. Edwards, *St. Louis*
St. Louis	Paul L. Friedman, *St. Louis*
St. Louis	Joseph Gagliardo, *St. Louis*
St. Louis	Andrew E. Galakatos, *St. Louis*
St. Louis	Richard J. Gimpelson, *St. Louis*
St. Louis	John A. Headrick, *St. Louis*
St. Louis	Alan Holtz, *St. Louis*
St. Louis	Charles J. Johnson, *St. Louis*
St. Louis	Jack Kayes, *St. Louis*
St. Louis	Alice D. Kitchen, *St. Louis*
St. Louis	Jerome L'Ecuyer, *St. Louis*
St. Louis	Kun T. Liao, *St. Louis*
St. Louis	Francis X. Lieb, *St. Louis*
St. Louis	Otakar Machek, *St. Louis*
St. Louis	Maria E. Manion, *St. Louis*
St. Louis	Jay Meyer, *St. Louis*
St. Louis	Melvin E. Meyer, *St. Louis*
St. Louis	Jerry N. Middleton, *St. Louis*
St. Louis	Robert N. Miller, *St. Louis*
St. Louis	Lawrence W. O'Neal, *St. Louis*
St. Louis	Meredith J. Payne, *St. Louis*
St. Louis	David E. Perkins, *St. Louis*
St. Louis	Paul J. Petruska, *St. Louis*
St. Louis	John J. Purcell, Jr., *St. Louis*
St. Louis	James C. Redington, *St. Louis*
St. Louis	Susan K. Reynolds, *St. Louis*
St. Louis	Hubert A. Ritter, *St. Louis*
St. Louis	Phillip L. Robbins, *St. Louis*
St. Louis	Sudha Saha, *St. Louis*
St. Louis	Melvin M. Schwartz, *St. Louis*
St. Louis	Sameer I. Shehadi, *St. Louis*
St. Louis	John P. Shields, *St. Louis*
St. Louis	David L. Simon, *St. Louis*
St. Louis	Kenneth R. Smith, Jr., *St. Louis*
St. Louis	George L. Tucker, *St. Louis*
St. Louis	Dolores R. Tucker, *St. Louis*
St. Louis	Tim Turner, *St. Louis*
St. Louis	Leo L. Wacker, *St. Louis*
St. Louis	Harvey Walker, Jr., *St. Louis*
St. Louis	Bruce J. Walz, *St. Louis*
St. Louis	William B. Webber, *St. Louis*
St. Louis	Joseph W. West, *St. Louis*
St. Louis	Miles C. Whitener, *St. Louis*
St. Louis	James M. Whittico, *St. Louis*

Fourth District

Franklin-Gasconade-Warren	Sam Farrell, *Washington*
Franklin-Gasconade-Warren	John O'Connor, *Warrenton*
Franklin-Gasconade-Warren	George Workman, *Hermann*
St. Charles-Lincoln	Victor Clever, *St. Charles*
St. Charles-Lincoln	Robert Cusworth, *St. Charles*
St. Charles-Lincoln	Michaele Penkoske, *St. Charles*

Fifth District

Audrain	Nancy Bunge, *Mexico*
Audrain	Joe Corrado, *Mexico*
Boone	Thomas R. Anderson, *Columbia*
Boone	William D. Bradshaw, *Columbia*
Boone	Diane Brukardt, *Columbia*
Boone	Jagadishwar Devkota, *Columbia*
Boone	G. W. N. Eggers, Jr., *Columbia*
Boone	Richard Heimburger, *Columbia*
Boone	Carl H. Ide, *Columbia*
Boone	David M. Klachko, *Columbia*
Boone	James A. Roller, *Columbia*
Boone	Robert M. Thomas, *Columbia*
Boone	Dana Weaver, *Columbia*
Boone	Roger Willcox, *Columbia*
Callaway	Vernon B. Jackson, *Fulton*
Cole	Charles W. Cooper, *Jefferson City*
Cole	Victoria Gunn, *Jefferson City*
Cole	Rebecca Lueckenhoff, *Jefferson City*
Cole	Thomas D. Robbins, *Jefferson City*
Lake of the Ozarks	Chris Fotopoulos, *Osage Beach*
Lake of the Ozarks	Melvin R. Hayden, *Camdenton*
Lake of the Ozarks	Ruth Kauffman, *Versailles*
Moniteau	L. M. Gallagher, *California*

Sixth District

Henry	G. S. Wetzel, *Clinton*
Lafayette-Ray	W. Wayne Boydston, *Odessa*
Lafayette-Ray	Charles T. Riley, *Richmond*
Pettis	Philip Hornbostel, *Sedalia*
Saline	Marvin Roehrs, *Marshall*
West Central	Wm. W. Haynie, *Butler*
West Central	Gerald B. Lee, *Kansas City*
West Central	Warren C. Lovinger, *Nevada*
West Central	William A. Turner, *Nevada*

Seventh District

Jackson	L. Glenn Agee, *Overland Park, KS*
Jackson	Ali Arbab, *Kansas City*
Jackson	Jennifer D. Ashby, *Kansas City*
Jackson	Grant A. Bever, *Lee's Summit*
Jackson	Alfred A. Caruso, *Kansas City*
Jackson	William F. Case, *Kansas City*
Jackson	Calvin J. Curts, *Kansas City*
Jackson	Frederick G. DeFeo, *Shawnee Mission, KS*
Jackson	William Dorzab, *Kansas City*
Jackson	Chester Fee, *Kansas City*
Jackson	Steven T. Fogel, *Kansas City*
Jackson	Curtis U. Franklin, *Kansas City*
Jackson	Edward Goldsich, *Kansas City*
Jackson	John W. Hardy, *Kansas City*
Jackson	David J. Harris, *Kansas City*
Jackson	Herman J. Hausheer, *Independence*
Jackson	George P. Hoech, Jr., *Kansas City*
Jackson	King Y. Lee, *Kansas City*
Jackson	Ted E. Lockwood, *Kansas City*
Jackson	James E. Mallow, *Shawnee Mission, KS*
Jackson	Peter J. Muelleman, *Independence*
Jackson	Carl M. Myers, *Platte City*
Jackson	Richard B. Michelson, *Kansas City*
Jackson	John D. Mitchell,*Kansas City*
Jackson	Gale B. Oleson, *Lee's Summit*
Jackson	Mark Ost, *Kansas City*
Jackson	Charlene M. Prather, *Kansas City*
Jackson	Sarvotham K. Reddy, *Kansas City*
Jackson	Andrew J. Rhodes, *Independence*
Jackson	Charles C. Roberts, *Kansas City*
Jackson	Larry A. Rosen, *Kansas City*
Jackson	Lawrence A. Rues, *Kansas City*
Jackson	Carl D. Siegel, *Kansas City*
Jackson	Marjorie S. Sirridge, *Kansas City*
Jackson	Wilber B. Spalding, Jr., *Kansas City*
Jackson	Carl F. Strauss, *Kansas City*
Jackson	Charles B. Wilkinson, *Kansas City*
Jackson	M. W. Wurster, *Kansas City*
Jackson	Jay H. Yedlin, *Kansas City*

Eighth District

Dallas-Hickory-Polk-Dade	J. Gustavo Nix, *Bolivar*

Greene	Clifford J. Ameduri, *Springfield*
Greene	Charles Ash, *Springfield*
Greene	Michael S. Clark, *Springfield*
Greene	Darrel Domann, *Springfield*
Greene	James Duff, *Springfield*
Greene	Duane Hellam, *Springfield*
Greene	H. B. Ivy, *Springfield*
Greene	Richard Kissell, *Springfield*
Greene	Norman Knowlton, *Springfield*
Greene	Harold Lurie, *Springfield*
Greene	Marc McCorcle, *Springfield*
Greene	Stanley Peterson, *Springfield*
Greene	Dewayne Piker, *Springfield*
Greene	Arteso Raborar, *Springfield*
Greene	James T. Rogers, *Springfield*
Greene	James Shaeffer, *Springfield*
Greene	Dan Sullivan, *Springfield*
Greene	Norman Wall, *Springfield*
Greene	James Wolfe *Springfield*
Greene	Robert Zahn, *Springfield*
Jasper	Robert Brigden, *Joplin*
Jasper	Mark Cotner, *Joplin*
Jasper	Michael Nickell, *Joplin*
Jasper	Wendell D. Rankin, *Joplin*
Jasper	Ramesh Shah, *Joplin*
Jasper	Duane W. Sherrod, *Joplin*
Jasper	Robert Willcoxon, *Joplin*
Ozarks	Paul B. Anderson, *Neosho*
Ozarks	F. R. Esparrago, *Monett*
Ozarks	David McMillan, *Neosho*
Webster	T. M. Macdonnell, *Marshfield*

Ninth District

Mid-Missouri	Hugh Bartlett, *Rolla*
Mid-Missouri	Jim Bass, *Rolla*
Mid-Missouri	Robert Huster, *Rolla*
Mid-Missouri	Ed Jenkins, *Waynesville*
South Central	James A. Hasek, *Mountain Grove*
South Central	L. G. Mayuga, *Cabool*

Tenth District

Butler-Wayne-Ripley-Carter	James W. Gieselmann, *Poplar Bluff*
Butler-Wayne-Ripley-Carter	Kirby Turner, *Poplar Bluff*
Cape Girardeau	Gordon W. Eller, *Cape Girardeau*
Cape Girardeau	J. Marshall Jung, *Cape Girardeau*
Cape Girardeau	Edward J. Masters, *Cape Girardeau*
Cape Girardeau	Jesse R. Ramsey, *Cape Girardeau*
Cape Girardeau	Thomas C. Sparkman, *Cape Girardeau*
Dunklin	Nicholas Robinson, *Kennett*
Jefferson	Benjamin I. Albano, *Crystal City*
Jefferson	Martha Reed, *Hillsboro*
SEMO	Gregory Bowers, *Sikeston*
SEMO	Robert L. Frazier, *Sikeston*
SEMO	Stanley G. Jones, *Sikeston*
SEMO	Aziz Mahboubi, *Sikeston*
Mineral Area	Charles Chastain, *Flat River*

Delegates-At-Large

Arlen D. Winsky, *Springfield, Speaker*
Jo-Ellyn M. Ryall, *St. Louis, Vice Speaker*

Past-Presidents

Richard V. Bradley, *St. Louis*
Joseph L. Fisher, *St. Joseph*
Walter A. German, *Springfield*
E. T. Hansbrough, *Poplar Bluff*
John N. Martin, *St. Joseph*
Howard J. McAlhany, *Springfield*
Ronald A. Youmans, *Kansas City*

Medical School Deans

William Stoneman, *St. Louis University*

Student Delegates

Mr. Lee Godwin, *St. Louis University*
Mr. William Gonser, *St. Louis University*
Ms. Carole Matteri, *St. Louis University*
Ms. Gretchen Meyer, *St. Louis University*
Mr. Joseph Meyer, *University of Missouri-Columbia*
Ms. Loria Mills, *University of Missouri-Columbia*
Ms. Carla Siegfried, *University of Missouri-Kansas City*
Ms. Nasreen Syed, *University of Missouri-Kansas City*

Hospital Medical Staff Section

David Auner, *Pilot Knob*

Resident Physician Section

Victoria Martin, *Kansas*

MSMA President Larry G. Piepergerdes, M.D., gave the invocation and welcoming remarks. Weldon Sportsman, M.D., Chairman of Committee on Credentials, reported that seven officers, 23 councilors, and 130 delegates were present. The minutes from the 129th Annual Convention were approved as published in the July 1987 issue of *Missouri Medicine*.

Dr. Piepergerdes then addressed the entire House and his remarks appear on page 367 of this issue.

Vice Speaker Jo-Ellyn Ryall introduced the President of the MSMA Auxiliary, Sandy Mitchell, who addressed the House. Her remarks appear on page 372 of this issue.

Following her remarks, Mrs. Mitchell asked Dr. Piepergerdes to assist her in distributing the AMA-ERF checks to Missouri's four medical schools. The 1988 contributions to medical students assistance funds totalled $18,392.87. This money is to be used by the recipient schools in their financial assistance programs. In addition, 1988 contributions to the Missouri School Excellence Funds, which may be used by the school in any program that they desire, totaled $35,279.90.

Representing Washington University School of Medicine, Frederick Peterson, M.D., accepted checks for $3,979.01 in designated contributions and $5,942.63 in undesignated contributions. Hugh Stephenson, M.D., Interim Dean of the University of Missouri-Columbia School of Medicine,

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Representing Washington University, Fred Petersen, M.D., accepts AMA-ERF checks from out-going Auxiliary President Sandy Mitchell as MSMA President Larry Piepergerdes looks on.

accepted checks for $4,125.61 in designated funds, and $7,674.78 in undesignated funds. William Stoneman M.D., Dean of the St. Louis University School of Medicine, accepted contributions to the Medical Assistance Fund of $7,537.76 and to the Medical School Excellence fund totals $14,943.35. Marjorie Serridge, M.D., Assistant Dean at the University of Missouri-Kansas City School of Medicine accepted the 1988 contribution to UMKC. Designated contributions came to $2,932.49 with $6,730.14 in undesignated funds.

Next, Dr. Piepergerdes asked James M. Whittico, M.D., to come to the podium to receive the 1988 MSMA Citizenship and Community Service Award. Involved in many organizations in St. Louis and throughout the state, Dr. Whittico currently serves as Chairman of the Missouri State Board of Health. He has served on the State Board of Healing Arts, the Governor's Task Force on Drug Abuse and a variety of municipal appointments. He is the Medical Director for Dismus House, a halfway house for parolees.

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Jordan W. Burkey, M.D., accepts a plaque from MSMA President Larry Piepergerdes honoring his six years of outstanding leadership as editor of MISSOURI MEDICINE.

In addition Dr. Whittico has been a consultant to the National Institute of Health, a member of the board of the St. Louis Regional Health Center, and served as medical adviser to Forest Park Community College in St. Louis.

His numerous honors and awards include the Robert E. Shutler Leadership Award from the St. Louis Metropolitan Medical Society in 1987; the Health Care Leadership Award from the Hospital Association of Metropolitan St. Louis; a 20-year service pin from the St. Louis Metropolitan Police Department; and a plaque marking his contributions to the Frank J. Brown Lodge of the Prince Hall Grand Masonic Lodge. Dr. Whittico is also an honorary member of St. Louis University. The American Cancer Society, of which he is vice president, recently presented its Wendell Scott Leadership Award to Dr. Whittico.

Among other things Dr. Whittico devised an educational program directed toward Missouri blacks. The program is unique because it involves pastors of black churches and Masonic Lodges to reach a population at singular risk for increased cancer mortality.

Dr. Whittico's professional memberships also cover a range of organizations. He is past president of the National Medical Association, the Pan American Missouri Medical Association, and the Mound City Medical Forum. He is an honor member of the St. Louis Metropolitan Medical Society and has long served as a delegate to these organizations at their conventions.

Dr. Piepergerdes then presented Dr. Whittico with a plaque, and Dr. Whittico addressed the MSMA House.

Following Dr. Whittico's remarks, Dr. Piepergerdes asked Jordan W. Burkey, M.D., to come forward. Dr. Burkey of Springfield became editor of *Missouri Medicine* in 1982. During his six years in charge of the journal, he has overseen a complete graphic redesign of the publication as well as shaped its editorial excellence. His hard work and influence led to two major medical journalism awards from the Sandoz Pharmaceutical Company. In 1986 *Missouri Medicine* received first place in the annual Sandoz medical journalism competition. The journal received an honorable mention in 1987 and again in 1988 in this competition due to the publication's continued excellence in design and editorial content.

Although Dr. Burkey is "retiring" from the editorship of the Journal he will continue as editor emeritus. He will represent *Missouri Medicine* this fall in Philadelphia at the annual meeting of the American Medical Writers Association. There he will be in charge of a round table discussion for editors of state medical journals.

A member of MSMA since 1956, Dr. Burkey focused upon the information needs of MSMA members while at the helm of *Missouri Medicine*. He was recognized for his hard work, his interest in medical journalism, and for creating one of the finest state medical journals in our nation.

Next, Dr. Piepergerdes introduced Alan R. Nelson, M.D., who is Chairman of the AMA Board of Trustees. Dr. Nelson is a practicing internist and endocrinologist from Salt Lake City, Utah. He was elected to the AMA Board of Trustees in 1980 and was elected to his second term as chairman in 1987. In addition to his private practice, Dr. Nelson also is an associate clinical professor at the University of Utah School of Medicine. He has represented the AMA in Congressional hearings on PRO's, national health insurance proposals, and injury compensation. He was appointed to the Drug Commission in 1982 and served on the Commission's executive committee during 1986. Dr. Nelson addressed the MSMA House regarding current AMA issues. His remarks appear on pages 373-374.

After Dr. Nelson's remarks, Vice Speaker Ryall announced that the Reports of Officers, Committees and Commissions were referred as shown in the Delegate's Handbook. She asked for supplemental reports of committees and commissions. Seeing none, she invited William D. Bradshaw, M.D., to give his report of the Missouri Patient Care Review Foundation.

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Dr Piepergerd

James M. Whittico, M.D., acknowledges a standing ovation after receiving the 1988 MSMA Citizenship and Community Service Award. Dr. Whittico currently serves as Chairman of the Missouri State Board of Health.

Next, Vice Speaker Ryall introduced Marvin Singleton, M.D., who is in charge of the MMPAC. He presented the MMPAC report to the MSMA House. Then Vice Speaker Ryall informed the House that the Supplemental Report of the Council for their meeting held March 16 had been distributed to the House and would be referred to the Reference Committee on Report of Officers.

Dr. Piepergerdes then announced his appointments to the 1988 Nominating Committee whose members are chosen for each Councilor District:

District No. 1, Stephen Vilmer, *Kansas City*
District No. 2, C. C. Cohrs, *Moberly*
District No. 3, Jack Case, *Chairman, St. Louis*
District No. 4, Sam Farrell, *Washington*
District No. 5, Bill Eggers, *Columbia*
District No. 6, Jerry Meyer, *Concordia*
District No. 7, Bill Chase, *Kansas City*
District No. 8, Dan Sullivan, *Springfield*
District No. 9, Thomas Stubbs, *West Plains*
District No. 10, Thomas Sparkman, *Cape Girardeau*
Student Councilor District, Carla Siegfried, *UMKC*
Hospital and Medical Staff Section, David Auner, *Pilot Knob*
Resident Physician Section, Victoria Martin, *Kansas City*

Dr. Case, Chairman, called a meeting of the Nominating Committee for 4:00 p.m. that afternoon.

Stephen Vilmer, M.D., talks to Meryl Lynn McKean of Action News 4 of Kansas City, about Resolution 30, "AIDS Testing in Hospital," which Clay-Platte County Medical Society introduced in the House of Delegates.

At the request of the Vice Speaker, the House stood and observed a moment of silence in tribute to those MSMA members who had died since the 1987 Annual Convention. The Courtesy Resolution honoring them appears on page 365 of this issue.

Next, Speaker Winsky appointed the Reference Committees as follows:

Reference Committee on Constitution and Bylaws

Douglas Bogart, *Chairman, Kansas City*
Nancy Bunge, *Mexico*
Richard W. Clement, *St. Louis*
Norman Knowlton, *Springfield*
Nicholas Robinson, *Kennett*

Reference Committee on Reports of Officers

Miles Whitener, *Chairman, St. Louis*
Robert Brigden, *Joplin*
John Mitchell, *Kansas City*
Purificacion Florendo, *Hannibal*
Vernon Balster, *St. Louis*

Reference Committee on Resolutions

Philip Hornbostel, *Chairman, Sedalia*
Sidney Christiansen, *St. Joseph*
Robert Cusworth, *St. Charles*
Paul Petruska, *St. Louis*
William Case, *Kansas City*
Nasreen Syed, *UMKC medical student*

Stanley Peterson of Springfield was appointed as Parliamentarian.

Credentials Committee

Weldon Sportsman, *Chairman, Kansas City*
Warren Lovinger, *Nevada*
Harvey Walker, Jr., *St. Louis*

The Tellers

Carl Meyers, *Chief Teller, Platte City*
William Haynie, *Butler*
James Bass, *Rolla*
Dana Weaver, *Columbia*
Robert N. Miller, *St. Louis*

Speaker Winsky announced that 37 resolutions appeared in the handbook. These were submitted 45 days prior to the Annual Convention as required by the MSMA bylaws. In addition, four late resolutions were introduced, each requiring a two-thirds majority to become business of the House.

Two late resolutions were introduced by the Cape Girardeau Area Medical Society. Gordon Eller, M.D., from the Cape Girardeau Area Medical Society explained the Worker's Compensation System resolution to the House. The House gave approval to consider the resolution as business during the session. It was numbered 38 and referred to the Reference Committee on Reports of Officers.

The next resolution regarding Guidelines for Medically Unnecessary Service Denials was introduced by Tom Sparkman, M.D., of the Cape Girardeau County Area Medical Society. It was approved by the House, numbered 39 and referred to the Reference Committee on Resolutions.

The third resolution was introduced by Charles W.

Above Right: Marvin Singleton, M.D., shows prospective bidders at the Missouri State Medical Foundation Auction one of the items ready for sale.

Above Left: Out-going MSMA President Larry Piepergerdes, M.D., passes the gavel to 1988 MSMA President T. J. Cooper, M.D., in inauguration ceremonies at the 130th Annual Convention.

Chastain, M.D., of the Mineral Area Medical Society regarding AMA Discrimination in Medical Specialty Journals Distribution. The resolution failed to receive approval by the House for consideration as business.

The final late resolution was introduced by Gerald Lee, M.D., of West Central Missouri Medical Society. Regarding Potential Toxic Contamination of the Missouri River, the resolution was approved by the House, numbered 40 and referred to the Committee on Reports of Officers.

Seeing no other business to come before the House, the Speaker made a few announcements and then adjourned the First Session of the House of Delegates.

SECOND SESSION

The Second Session of the 130th Annual House of Delegates of the Missouri State Medical Association was called to order by Speaker Winsky at 4:00 p.m. on Friday, March 18.

Dr. Weldon Sportsman gave the Supplemental Report of the Credentials Committee, stating that seven officers, 23 councilors and 213 delegates were present and constituted a quorum.

Speaker Winsky then asked Dr. Larry Piepergerdes, President of MSMA, to present the special awards of appreciation to three Missouri legislators who have been supportive of medicine at the Capitol. Honored were Sen. Henry Panethiere (D-*Kansas City*), Rep. Mary Groves Bland (D-*Kansas City*) and Rep. Jan Martinette (R-*Grandview*) who received plaques from MSMA.

Following the presentations, Vice Speaker Ryall introduced Robert G. Harmon, M.D., Director of the Missouri Department of Health. Dr. Harmon addressed the House and his remarks appear on page 377.

After Dr. Harmon's speech, Vice Speaker Ryall asked Dr. Richard Bradley to give his report on MOMEDICO.

Afterwards, Dr. William Case, Chairman of the Nominating Committee, presented the Report of the Nominating Committee that proposed the following slate of officers for 1987-88:

President Elect	Dr. Marvin Singleton, *Joplin*
Vice-Presidents	Dr. Ken Smith, *St. Louis* Dr. William Richardson, *Union* Dr. Herman Hausheer, *Kansas City*
Speaker of the House	Dr. Arlen Winsky, *Springfield*
Vice Speaker of the House	Dr. Jo-Ellyn Ryall, *St. Louis*
AMA Delegates	Dr. Francis X. Lieb, *St. Louis* Dr. Hugh E. Stephenson, *Columbia* Dr. George M. Bohigian, *St. Louis* Dr. Walter A. German, *Springfield*
AMA Alternate Delegates	Dr. Richard V. Bradley, *St. Louis* Dr. Robert R. MacDonald, Jr., *St. Louis* Dr. Carl Strauss, *Kansas City* Dr. Keith Ashcraft, *Kansas City*

Reference Committee on Constitution and Bylaws

Next came the report of the Reference Committee on Constitution & Bylaws. Dr. Douglas Bogart, Chairman, presented the report. The Committee recommended that Report A be adopted. It covers proposed amendments from the MSMA Council for clarification changes to the MSMA Constitution and Bylaws for Chapter III, Section 7 on reference committees. Report A also provided for MAOPS and MSMA Auxiliary representation on the Physician Rehabilitation Committee as outlined in Chapter VII, Section 1. Report A was adopted by the House.

In addition, Dr. Bogart presented Report B which involves wording changes to the purpose/mission statement of MSMA. This report was tabled until the 1989 convention when it will be voted upon by the delegates to the 131st MSMA House as outlined in the MSMA Constitution and Bylaws.

Finally, Dr. Bogart's committee made recommendations on the following resolutions. **House actions on these resolutions appear in the section "Resolutions" on pages 361-365.**

Resolution 4.	Hospital Medical Staff Section Bylaws
Resolution 8.	Indigent Care
Resolution 13.	Missouri Indigent Care
Resolution 14.	Delegating Postoperative Care by the Ophthalmologist
Resolution 15.	Regulation of Ordering Laboratory Studies and Diagnostic Tests
Resolution 17.	Strategy for Further Tort Reform
Resolution 20.	Interest in Promoting Truth in Advertising
Resolution 21.	Unregulated Insurers
Resolution 24.	"No Bed" List
Resolution 32.	Right to Hospital Privilege
Resolution 33.	Practice of Medicine

The MSMA House of Delegates listens intently as Ron Cosens, Executive Director of the Metropolitan Medical Society of Greater Kansas City addresses the delegation at the 130th Annual Meeting.

Reference Committee on Reports of Officers

Dr. Miles Whitener, Chairman, gave the Committee report. Since several items were considered noncontroversial, the Committee placed the following on the Consent Calendar for recommendation for adoption:

No. 1 Report of the MSMA Auxiliary
No. 2 Report of the Committee on Legislative Affairs
No. 3 Report of the Secretary
No. 4 Report of the Treasurer — MSMA Financial Statement
No. 5 Report of the Executive Vice President
No. 6 Council Minutes with the Addition of the Supplemental Council Minutes
No. 7 Report of the Missouri State Medical Foundation — MSMF Financial Statement
No. 8 Report of the Commission on Public Affairs
No. 9 Report of the Committee on Publication
No. 10 Report of the Ad Hoc Committee on "Sunsetting"
No. 11 Report of the Committee on Planning
No. 12 Report of the Judicial Council

The Consent Calendar was adopted by the House.

House actions on the following resolutions appear in the section "Resolutions" on pages 361-365.

Resolution 1.	Right of Choice
Resolution 3.	Waiver of MSMA Dues for Political Officeholders
Resolution 6.	Protection of Life: All-Terrain Vehicles
Resolution 7.	Mandatory HMO Enrollment
Resolution 9.	Notification of Physicians When a Patient is HIV Positive
Resolution 18.	Science Education
Resolution 26.	Formation of Young Physicians Committee MSMA.
Resolution 29.	Disability Insurance for Physicians with Infectious Diseases
Resolution 30.	AIDS Testing in Hospitals
Resolution 34.	Unnecessary Government Intrusion into the Practice of Medicine
Resolution 38.	Workmen's Compensation System
Resolution 40.	Potential Toxic Contamination of the Missouri River

Reference Committee on Resolutions

Dr. Philip Hornbostel, Chairman of the Reference Committee on Resolutions, stated the following items had been placed on the Consent Calendar:

No. 1 Report of the Commission on Continuing Education and Health Manpower.
No. 2 Report of the Physician Rehabilitation Committee.

The House adopted these items on the Consent Calendar.

House actions on the following resolutions are reported in the section "Resolutions" on pages 361-365.

Resolution 2.	Physicians/Third Party Payors Disputes
Resolution 5.	Physician Prescribing and Pharmacist Dispensing
Resolution 10.	Encroachment of Third Parties in Patient-Doctor Control of Medical Care
Resolution 11.	Access to Quality Health Care
Resolution 12.	Medicare Mandated Restrictions — Their Effects on Interaction Between Physician and Patient
Resolution 16.	Insurance Coverage for Screening Mammography
Resolution 19.	Restriction on Medical and/or Life Insurance as a Result of Psychiatric Treatment
Resolution 22.	Office Care and Treatment Determined Unnecessary by Medicare
Resolution 23.	Reimbursement of Hospital Receiving Transfer Patient
Resolution 25.	Medicare Denial of Disputed Claims
Resolution 27.	Professional Liability Insurance Coverage
Resolution 28.	DRGs for Rural Hospitals
Resolution 31.	Resident Workload Study
Resolution 35.	DOSS Discrimination Questionnaire
Resolution 36.	Development of Different DOSS Questionnaire for Physicians' Offices
Resolution 37.	Concern Over HCFA Mandated Change in Wording of Medicare "Medically Unnecessary Services" Forms
Resolution 39.	Guidelines for Medically Unnecessary Service Denials

Following this report, the Speaker asked for old and new business. Seeing none, he adjourned the Second Session of the House of Delegates.

Newly-installed MSMA Auxiliary President Eileen Dyer and her husband, Gary Dyer, M.D., Chairman of the MSMA Council, get together for a picture with MSMA President T. J. Cooper, M.D., and his wife Barbara.

THIRD SESSION

The Third Session of the 130th Annual Meeting of the House of Delegates of the MSMA was called to order by Speaker Winsky at 7:30 a.m. on Sunday March 20.

The Report of the Committee on Credentials was presented by Dr. Sportsman who announced that seven officers, 23 councilors and 240 delegates were present. This represented a quorum and the report was adopted.

The first item on the agenda was the Election of the Officers, AMA Delegates and AMA Alternate Delegates. These individuals were presented by the Nominating Committee at the Second Session (see page 357 for complete list) and the nominations were closed during that Session. The slate of officers for 1988-89 was unanimously elected by the House. Dr. Singleton, the new President-elect, briefly addressed the House.

The next item of business was the Report of the Election of the Councilors and Vice-Councilors; these elections are held in the individual districts to fill expired terms. Vice Speaker Ryall called on Dr. Berry Ivy to present the results. He announced:

First District

Councilor	Gary A. Dyer
Vice Councilor	Stephen Vilmer

Third District

Councilor	J. Otto Lottes Frederick Peterson
Vice Councilor	Mary J. Payne

Fifth District

Councilor	Alan L. Braun Jerry Murrell
Vice Councilor	Ruth Kauffman

Seventh District

Councilor	Raymond Caffrey
Vice Councilor	Mark W. Martin

Eighth District

Councilor	Duane Hellam
Vice Councilor	Robert Brigden

Ninth District

Councilor	David O. Barbe
Vice Councilor	Thomas R. Stubbs

Students

Councilor	Evan K. Saunders
Vice Councilor	Carole Matteri

Vice Speaker Ryall then asked for any unfinished business. Carla Siegfried, UMKC medical student and Alternate Delegate to the AMA, updated the House on the MSMA student members' activities.

During New Business, Charles Cusworth, M.D., introduced a late resolution which was unanimously accepted as business of the House.

House action on the following resolution is reported in the section "Resolutions" on pages 361-365.

Resolution 41.	Medicare Requirement of "Medically Unnecessary Denial" Forms for Non-Participating Physicians

Thomas Coleman, U.S. 6th District Congressman, center, shares a table with Anita Singleton and Marvin Singleton, M.D., at the MSMA Public Affairs Breakfast.

Next, Dr. Ivy conducted the installation of officers.

After the installation of officers, Speaker Winsky called on Dr. T. J. Cooper, newly-installed MSMA president, who announced his appointments of chairmen for the MSMA committees and commissions (please note that a complete listing of all MSMA standing committees and commissions will appear in the August Directory issue of *Missouri Medicine).*

Committee on Constitution and Bylaws

Douglas Bogart, *Kansas City*

Committee on Legislative Affairs

John Matthews, *Jefferson City*

Physician Rehabilitation Committee

John P. Carmody, *St. Louis*

Committee on Planning

Philip Hornbostel, *Sedalia*

Committee on Continuing Education and Health Manpower

William D. Bradshaw, *Columbia*

Commission on Medical Economics, Third Party Medicine, and Governmental Relations

C. W. Chastain, *Farmington*

Commission on Medical-Legal Affairs

Richard Fallon, *St. Louis*

Commission on Public Affairs

Michaele Penkoske, *St. Charles*

Publications Committee

Donald G. Sessions, *St. Louis*

Commission on Interspecialty Medicine

J. Regan Thomas, *St. Louis*

The Judicial Council

Donald McIntosh, *Kansas City*
Richard V. Bradley, *St. Louis,* five-year term.

Speaker Winsky announced that the 131st Annual Convention will be held April 13-16, 1989 at the Marriott Pavilion Hotel in St. Louis, the 132nd Annual Convention will be held April 5-8, 1990 at Tan-Tar-A at the Lake of the Ozarks and the 133rd Annual Convention has not been finalized for 1991. Invitations were received for the 1992 Convention to be in St. Louis and the 1993 to be at the Lake of the Ozarks.

The Speaker then adjourned the 130th Annual Convention of the MSMA House of Delegates on March 20, 1988. ■

***Editors note:** Complete minutes for the 130th Annual Meeting are on file at the MSMA Office, 113 Madison, Jefferson City, MO. Any MSMA member interested in reviewing the complete report may do so at the Association office.*

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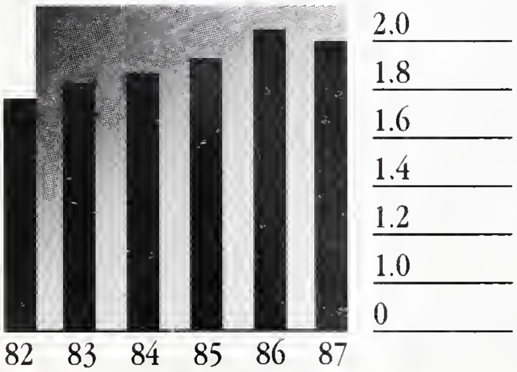

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Resolutions of the 130th MSMA House of Delegates

Resolution 1

Right of Choice

Introduced by the Butler-Wayne-Ripley-Carter Counties Medical Society

Resolved, that the MSMA opposes any policy that removes the physician's right of choice in patient care.

House Action: Not Adopted.

Resolution 2

Physician/Third Party Payors Disputes

Introduced by the Butler-Wayne-Ripley-Carter Counties Medical Society

Resolved, that the MSMA form a committee to evaluate disputes between Missouri physicians and third party payors.

Fiscal note: Less than $1000.00

House Action: Referred to the MSMA Council.

Resolution 3

Waiver of MSMA Dues for Political Officeholders

Introduced by the MSMA Council

Resolved, that beginning January 1, 1989, the Missouri State Medical Association waive dues to any MSMA member elected to the U.S. Congress, state legislature or executive branch of the federal or state governments, and continue until the political term of such office expires, and be it further

Resolved, that the MSMA encourage component medical societies to waive component dues for these elected officials.

Fiscal note: Less than $1000.00.

House Action: Adopted.

Resolution 4

Hospital Medical Staff Section Bylaws

Introduced by the MSMA Council

Resolved, that MSMA Bylaws be changed to require that those physicians participating as HMSS members be members of the MSMA, and be it further

Resolved, that this change can be accomplished by the following Bylaw change: (bracketed words are deleted, underlined words are added)

Chapter VIII. Hospital Medical Staff Section

Section 1. Membership. Membership in the section shall be limited to Missouri State Medical Association members [selected by physician members of the medical staffs of hospitals in Missouri].

who are also members of a hospital medical staff in a Missouri hospital, and who are selected by the physician members of their respective medical staffs.

House Action: Not Adopted.

Resolution 5

Physician Prescribing and Pharmacist Dispensing

Introduced by the Cape Girardeau County Medical Society

Resolved, that the MSMA supports the physician's right to dispense drugs and devices when it is in the best interest of the patient and consistent with AMA's ethical guidelines.

Fiscal note: Would be included in budget for Legislature.

House Action: Adopted.

Resolution 6

Protection of Life: All-Terrain Vehicles

Introduced by the Cape Girardeau County Medical Society

Resolved, that the MSMA publicize through education programs the dangers of all-terrain vehicles, especially to persons unlicensed to drive other vehicles.

Fiscal note: $1200.00.

House Action: The above amended resolution was adopted.

Resolution 7

Mandatory HMO Enrollment

Introduced by the Cape Girardeau County Medical Society

Resolved, that the MSMA oppose employer's requirement for mandatory enrollment in a Health Maintenance Organization for employees.

House Action: Adopted.

Resolution 8

Indigent Care

Introduced by the Cape Girardeau County Medical Society

Resolved, that the Missouri State Medical Association urge all physicians to share in the care of indigent patients.

Fiscal note: $1500.00.

House Action: Adopted.

Resolution 9

Notification of Physicians When a Patient is HIV Positive

Introduced by the Cape Girardeau County Medical Society

Resolved, that the Missouri State Medical Association:

1. Identify risk factors and guidelines for hospitals, medical staffs and health workers appropriate to the care of AIDS and HIV positive patients,
2. Include in such guidelines policy that would enable physicians caring for patients with a positive HIV test to discuss with legal immunity and in a confidential manner these patients with other health care professionals who are also involved in their case, and assist state medical societies in changing state laws where such information exchange is now prohibited,
3. Distribute these guidelines widely and encourage medical staffs and health workers to work closely with their hospital administrations and governing bodies in establishing appropriate hospital policy regarding AIDS and HIV positive patients,
4. Affirm its support for the dignity and self-respect of all patients, and
5. Oppose all acts of medically unfounded discrimination against patients because of their medical condition.

House Action: Adopted.

Resolution 10

Encroachment of Third Parties in Patient-Doctor Control of Medical Care

Introduced by the Cape Girardeau County Medical Society

Resolved, that the MSMA continue its commitment to inform physicians and the lay public, who constitute the patient population, regarding the potential limitations of the quality of medical care that may ensue as the result of control by government and/or large hospital corporations and insurance companies; and be it further

Resolved, that the Association do so through its education facilities, journal and its public relations department.

House Action: Adopted.

Resolution 11

Access to Quality Health Care

Introduced by the Cape Girardeau County Medical Society

Resolved, that the MSMA continue to use its resources, as appropriate, in effective opposition to legislation that either mandates Medicare assignment as a condition of licensure or makes failure to accept assignment in all cases a violation of a state's Consumer Protection Act, an element of unprofessional conduct, or a misdemeanor violation of criminal law.

House Action: Adopted.

Resolution 12

Medicare Mandated Restrictions — Their Effect on Interaction Between Physician and Patient

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA affirm a policy in opposition to mandated restriction of work up, laboratory or referral investigation and/or financial arrangements between physician and patient when such arrangement can be based on realistic documented work up; and be it further

Resolved, that MSMA petition the AMA to affirm a similar or identical policy; and be it further

Resolved, that legal opposition to Medicare mandated restriction of medical work up, laboratory or referral investigation and financial arrangements be sought, particularly in any case where sound medical evidence including economic factors disproves any need for such mandated restrictions.

House Action: Adopted.

Resolution 13

Missouri Indigent Care

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA develop a plan to solve the indigent care problem for the State of Missouri based on the concept of voluntary physician service in return for a permanent solution to the professional liability crisis in Missouri.

House Action: Not Adopted.

Resolution 14

Delegating Postoperative Care by the Ophthalmologist

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that it is the official policy of the Missouri State Medical Association that postoperative care should not be delegated to anyone except the operating surgeon or a physician under his direct supervision, except under unusual circumstances where the operative surgeon is physically unable to provide such care or where such care is to be provided by another ophthalmologist appropriate to provide the patient's postoperative medical care. In any case, such care should not be delegated to anyone other than an ophthalmologist who agreed before the surgery is performed to assume the responsibility for such postoperative care, and further, that the patient is informed prior to surgery that such arrangement has been made; and be it further

Resolved, that any ophthalmologist who continues to abrogate his responsibility be considered for sanctions by the Board of Healing Arts of Missouri.

House Action: Referred to the MSMA Council.

Resolution 15

Regulation of Ordering Laboratory Studies and Diagnostic Tests

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the Missouri State Medical Association is opposed to the practice of ordering of laboratory studies and other diagnostic tests without evidence or indication obtained from information by the physician in a history and physical examination.

House Action: Referred to the MSMA Council.

Resolution 16

Insurance Coverage for Screening Mammography

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the Missouri State Medical Association (MSMA) petition the state legislature to pass a law that private insurance companies as well as Medicaid be required to include screening mammographies in their coverage; and be it further

Resolved, that the Missouri State Medical Association petition the American Medical Association to petition Congress to require that Medicare recipients have screening mammographies as part of their insurance coverage.

House Action: Referred to the MSMA Council.

Resolution 17

Strategy for Further Tort Reform in Missouri

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA study the AMA alternative proposal and be prepared to go to the next Coalition to Preserve Health Care meeting with various proposals to deal with the professional liability crisis; and be it further

Resolved, that the MSMA have a plan prepared by 1989 to file with the Missouri General Assembly by January 1990 addressing the professional liability crisis.

House Action: The above substitute resolution was adopted.

Resolution 18

Science Education in Schools

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the Council on Scientific Affairs of the American Medical Association, in consultation with other AMA Councils, develop an action plan and set of recommendations for working with other concerned organizations and agencies to identify ways to improve science education in the nation, and to increase interest in science and science education on the part of the nation's youth; and be it further

Resolved, that this plan and set of recommendations be coordinated with other agencies in its implementation; and be it further

Resolved, that efforts be undertaken to obtain grants for industry and other organizations in partial support of this effort.

House Action: Adopted.

Resolution 19

Restriction on Medical and/or Life Insurance as a Result of Psychiatric Treatment

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA Council be asked to investigate the status of uninsurability for medical and for life insurance for individuals in the State of Missouri with a history of psychiatric treatment; and be it further

Resolved, that when the data is available, alert the Missouri legislators if this discrimination does exist and work with them to bring bills forward to end such discrimination; and be it further

Resolved, that MSMA urge its AMA delegates to bring the results of the study to the AMA at the earliest possible AMA House of Delegates Meeting.

House Action: The above substitute resolution was adopted.

Resolution 20

Interest in Promoting Truth in Advertising

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA go on record as encouraging legislation which provides for prominent warning labels in clear language to be prominently displayed upon all health insurance plans for the benefit of the people of the State of Missouri. The language of such warning labels is as follows: "Please read the following information carefully, as participation in this health plan may severely restrict your choice of physician and hospital"; and be it further

Resolved, that the MSMA encourages that such warnings not be limited to only the written literature of such health insurance organizations, but extended to the mass media advertising by such health insurance organizations to include, but not limited to, radio, television, outdoor advertising and the like; and be it further

Resolved, that the MSMA actively lobby the state legislature as well as the national legislature to enact such legislation immediately in the interests of promoting "truth in advertising."

House Action: Referred to the MSMA Council.

Resolution 21

Unregulated Insurors

Introduced by the St. Louis Metropolitan Medical Society

Resolved, that the MSMA go on record as encouraging changes in current law, so as to be inclusive of all health insurance groups under the regulatory control of the Division of Insurance, regardless of assuming risks; and be it further

Resolved, that the MSMA will actively lobby the State legislature to enact such legislation immediately, in the interest of promoting equality among such health insurance organizations and for the protection of the interest of the citizens of the State of Missouri.

House Action: Referred to the MSMA Council.

Resolution 22

Office Care and Treatment Determined Unnecessary by Medicare

Introduced by Gary A. Dyer, M.D.,
Buchanan County Medical Society

Resolved, that MSMA strongly urges that the criteria for pending denial of Medicare Part B coverage be publicized for all physicians, and be it further

Resolved, that MSMA strongly urge that physicians be notified prior to impending denial reimbursement to allow for appeal, and be it further

Resolved, that MSMA strongly urge that no patient is notified of denial until the appeal process is exhausted, and be it further

Resolved, that MSMA strongly urge the Medicare carrier to obtain physician review prior to denial of Medicare Part B reimbursement, and inform physicians of their proper recourse for appeal, and be it further

Resolved, that the MSMA strongly encourage the Medicare carriers to assemble the appeals information and process these claims promptly thereby not delaying legitimate payment beyond the present time frame, and be it further

Resolved, that MSMA strongly urge change in the nature of patient notification to a statement that these costs are not covered, without implication concerning the quality of care, and be it finally

Resolved, that our delegates to the HMSS and AMA take this resolution to the national meetings and seek its adoption as policy.

House Action: The above substitute resolution was adopted. *(Resolution 22 is a combination of proposed resolutions 22, 25, 37 and 39)*

Resolution 23

Reimbursement of Hospital Receiving Transfer Patient

Introduced by the Hospital Medical Staff Section

Resolved, the MSMA recommend that AMA petition HCFA to change the regulation requiring hospitals accepting patients in transfer from another hospital, to provide the rationale for the transfer in order to receive payment for services rendered.

House Action: Referred to the MSMA Council.

Resolution 24

"No Bed" List

Introduced by the Hospital Medical Staff Section

Resolved, that all members of the MSMA arrange to be placed on the "no bed" list at their hospitals for more than 15 days.

House Action: Not Adopted.

Resolution 25

Medical Denial of Disputed Claims

Introduced by the Hospital Medical Staff Section

See Resolution 22

Resolution 26

Formation of Young Physicians Committee MSMA

Introduced by the MSMA Council

Resolved, that the MSMA Council approve and support the formation of a committee of Young Physicians with representation from around the state either by Councilor District or other means, to focus on issues of concern to young physicians.

House Action: Adopted.

Resolution 27

Professional Liability Insurance Coverage

Introduced by the Clay-Platte Counties Medical Societies

Resolved, that the Missouri State Medical Association take vigorous exception to Section 3 of Senate Bill No. 663 (Second Regular Session-1986) and support legislation which would repeal said Section; and be it further

Resolved, that the MSMA House of Delegates instructs the Council to take appropriate action to seek the repeal of Section 3 of Senate Bill No. 663.

House Action: Not Adopted.

Resolution 28

DRG's For Rural Hospitals

Introduced by the Ozark Medical Society

Resolved, that the Missouri State Medical Association adopt as its official position and recommend to the federal government that the lower payments to rural hospitals as compared with urban hospitals for identical DRGs are unfair and this differential should be abolished, and be it further

Resolved, that our delegates to the AMA take this resolution to the AMA and seek its adoption as the AMA policy.

House Action: Adopted.

Resolution 29

Disability Insurance for Physicians with Infectious Diseases

Introduced by Larry A. Rues, Hospital Medical Staff Section

Resolved, that the AMA encourage insurance carriers to pay appropriate disability income to potentially infectious physicians and other health care providers who restrict or cease practice to minimize the risk of infecting their patients, and be it further,

Resolved, that this matter be forwarded to the AMA.

House Action: The above amended resolution was adopted.

Resolution 30

AIDS Testing in Hospitals

Introduced by the Clay-Platte Counties Medical Society

Resolved, that the Missouri State Medical Association support efforts to pass state legislation which would require routine HIV testing of all hospitalized patients unless exempted by the individual's admitting physician; and be it further

Resolved, that such legislation specifically state that physicians need not obtain a patient's consent in order to perform such a test.

House Action: Referred to the MSMA Council.

Resolution 31

Resident Workload Study

Introduced by the Medical Student Councilor District

Resolved, that the MSMA through its Commission on Continuing Education and Health Manpower ask the residency programs in the State of Missouri to begin their own self-study programs to clarify the actual hours residents work and how much time is spent in ancillary activities, and be it further

Resolved, that the results of these self-studies be reported back to the MSMA Council to be made available as documentation at the time when such legislation may be introduced.

House Action: The above substitute resolution was adopted.

Resolution 32

Right to Hospital Privilege

Hospital Medical Staff Section

Resolved, that the MSMA is opposed to granting hospital privileges on the basis of the physician's profitability to the hospital.

House Action: The above amended substitute resolution was adopted.

Resolution 33

Practice of Medicine

Introduced by Carl F. Strauss, M.D., Metropolitan Medical Society of Greater Kansas City

Resolved, that:

A. The practice of medicine includes, but is not limited to;
   1. Direct patient care by the responsible physician of record or his consultants
   2. Indirect patient care by ancillary consultants (eg. radiologists, pathologists)
   3. Use of medical knowledge and experience in peer reviewed activities
   4. Expert testimony in court on medical issues, and
   5. Any contractual influence on the specific care of a specific patient relative to their medical needs (eg. pre-admission denial, post admission stay; denial of appropriate tests or treatment).

B. For this reason, the performance of the activities or functions are properly subject to and accountable to the medical establishment and/or the State Board or Registration for the Healing Arts for the validity and appropriateness of medical care and judgement involved in performing such activities or functions.

House Action: Referred to the MSMA Council.

Resolution 34

Unnecessary Government Intrusion into the Practice of Medicine

Introduced by the Greene County Medical Society

Resolved, that MSMA and its component medical societies undertake to:

(a) intensively and extensively document these abuses,

(b) educate the public about the facts and true motivation for these tactics,

(c) inform their legislators of these abuses, and be it further

Resolved, that MSMA and its component societies take pains to point out to these bureaucracies the liability that is properly theirs for adverse effects on the health of the citizens of Missouri, our patients, for harmful policies, and be it further

Resolved, that these efforts continue ceaselessly until both honesty and sanity be reestablished and reinforced.

House Action: Referred to the MSMA Council.

Resolution 35

DOSS Discrimination Questionnaire

Introduced by the Greene County Medical Society

Resolved, that DOSS be requested and urged by MSMA to relieve the doctor's office of this requirement of racial questioning to eliminate possible prejudice and discrimination being introduced into a doctor's practice.

House Action: Adopted.

Resolution 36

Development of Different DOSS Questionnaire for Physicians' Offices

Introduced by the Greene County Medical Society

Resolved, that every effort be made by any and all friends of medicine to persuade the DOSS to develop a different questionnaire more appropriate to physicians' offices if such is needed to comply with Federal Medicaid requirements by distribution to all Medicaid physicians' offices, and be it further

Resolved, that, since the pursuance of their present policy will disrupt rapport between the Medicaid patients and the physicians serving them, all physicians be notified of this policy so that they may re-evaluate whether they desire to continue participation in the Medicaid program or to withdraw voluntarily from the program to keep from being compelled to answer self-incriminating questions.

Fiscal note: $1000.00

House Action: The above amended resolution was adopted.

Resolution 37

Concern Over HCFA Mandated Change in Wording of Medicare "Medically Unnecessary Services" Forms

Introduced by the St. Louis Metropolitan Medical Society

See Resolution 22

Resolution 38

Worker's Compensation System

Introduced by the Cape Girardeau County Medical Society

Resolved, that an ad hoc committee be formed by the Missouri State Medical Association to investigate suggestions for changes in the worker's compensation system in the State of Missouri.

House Action: The above amended resolution was adopted.

Resolution 39

Guidelines for Medically Unnecessary Service Denials

Introduced by the Cape Girardeau County Medical Society

See Resolution 22

Resolution 40

Potential Toxic Contamination of the Missouri River

Introduced by Gerald D. Lee, M.D.,
West Central Missouri Medical Society

Resolved, that the Missouri Medical Association opposes plans for a landfill at Quindaro.

House Action: Referred to the MSMA Council.

Resolution 41

Medicare Requirement of "Medically Unnecessary Denial" Forms for Non-Participating Physicians

Introduced by Robert Cusworth, M.D.,
St. Charles-Lincoln Counties Medical Society

Resolved, that the MSMA affirm its opposition in principle to any requirement of a physician to have patients sign statements that indicate or suggest in any way that medical services may or will be considered "medically unnecessary," and be it further

Resolved, that MSMA urge the AMA to affirm at a national level this same opposition and pursue rescinding of the requirement and repealing of the OBRA sections which have led to this requirement.

House Action: Adopted.

Courtesy Resolution on Deceased Members

WHEREAS, there have been 58 deaths among members since the 1987 Convention, and

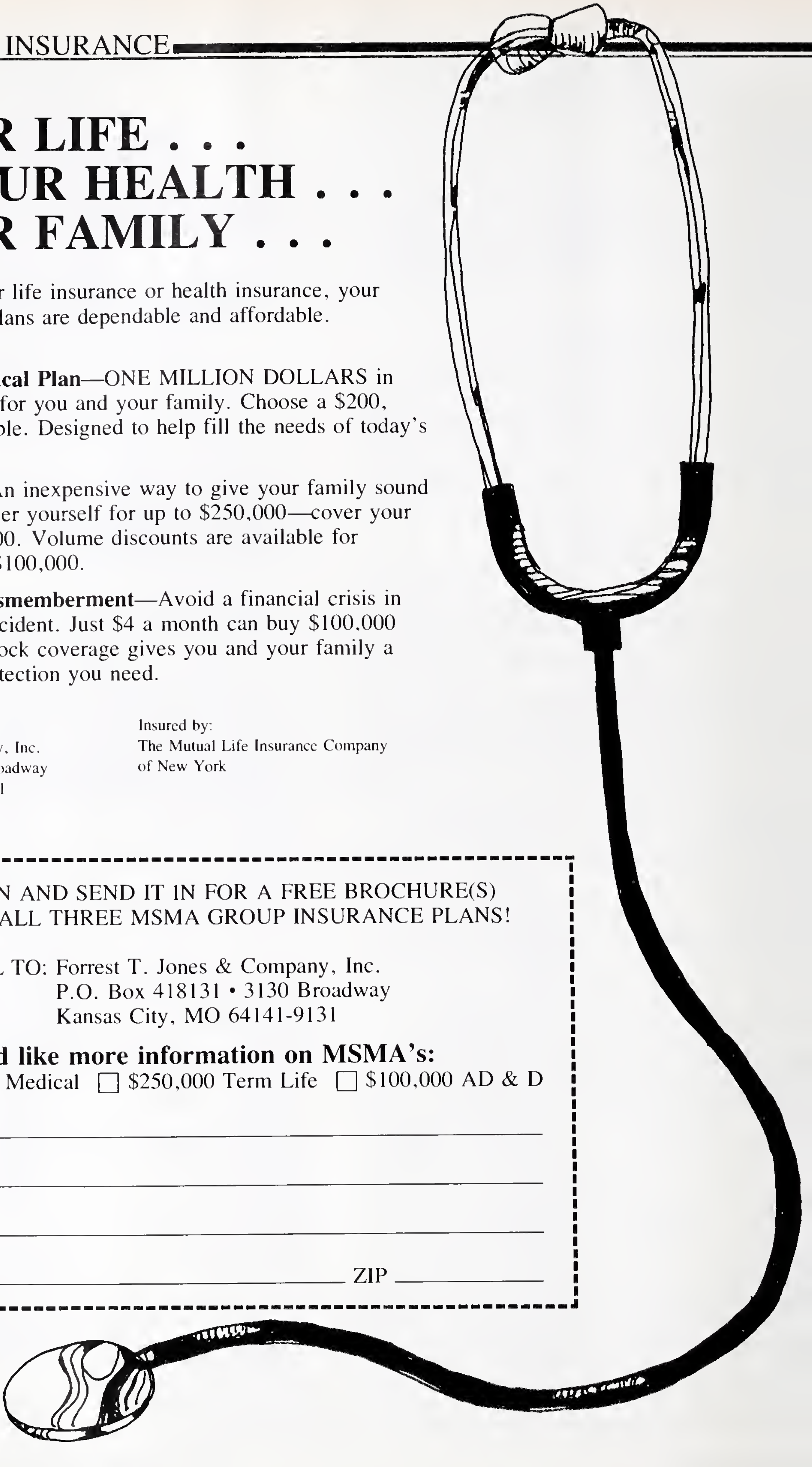
WHEREAS, each of these members is missed as an individual as well as for his/her contributions to the practice of medicine and to the Missouri State Medical Association, and

WHEREAS, the loss of each member is felt by all members, as well as his/her loved ones, and close associates and the patients he/she has served with dedication, therefore be it

RESOLVED, that the House of Delegates now pay personal tribute by standing for a moment of silence in memory of each of the 58 members we have lost and whose names will be recorded in the minutes of this Annual Convention.

Post, John P.
Washington
Rusan, Thomas E.
St. Louis
Forti, John J.
Florissant
Schwartzman, Bernard
St. Louis
Wilson, Keith S.
St. Louis
Whitman, Doyle C.
Shawnee Mission, KS
Wien, Irving A.
Shawnee Mission, KS
Bisno, Daniel
St. Louis
Donaldson, Robert C.
Ballwin
Gorla, Wayne O.
St. Louis
Hoffman, A. David
St. Louis
Kerr, Frank T.
Fayetteville, AR
Littman, Lewis E.
St. Louis
Magness, William C.
Nevada
Wall, Emmett D.
St. Louis
Tillman, Walter W.
Springfield
Wakefield, Franklin H.
Sun City, AZ
Drowns, Bruce V.
Kansas City
Fellhauer, Carl M.
Ballwin
Harkins, William B.
St. Louis
Hoffman, Jacob S.
Los Angeles, CA
Staton, R. Hamilton
Carrollton
Taussig, Barrett
St. Louis
Thompson, C. Leslie
Shawnee Mission, KS
Catanzaro, Anthony Jr.
Kirkwood
DuMontier, Rene J.
O'Fallon
Harlow, Lloyd M., Jr.
Kansas City
Strehlman, Benjamin G.
Bonita, CA
Walther, Roy A.
St. Louis
Bryan, William T.
St. Louis
Cochran, Donald
Columbia
Tonelli, George L.
St. Louis
Dennis, William P.
Desloge
Peterson, Donald P.
Fulton
Bryan, William T. K.
St. Louis
Hall, Marvin F.
Joplin
Michael, Harvey R.
Springfield
Abramson, Charles
St. Louis
Andrews, Berneil W.
Kansas City
Jeans, Virgil E.
Joplin
Peebles, Jonathan B.
Henry, TN
Staggs, William A.
Kansas City
Stanfield, Ned M.
St. Louis
Thurston, Donald L.
St. Louis
Wicks, Edwin O.
Kansas City
Carroll, Percy J.,
Brig. Gen.
St. Louis
Craig, Irwin T.
Longboat Key, FL
Johnson, Mitchell D.
St. Louis
Murney, Joseph
Washington
O'Connor, William B.
St. Joseph
Stephens, William A.
Chesterfield
Thiele, George H.
Alburquerque, NM
Brand, Earl L.
Park Rapids, MN
Lindquist, Carl N.
Reeds Spring
McFarland, M. Donald
Shawnee Mission, KS
Mier, Thomas M.
Columbia
Powell, Robert G.
Riverton, KS
Stindel, Charles E.
St. Louis

MSMA GROUP INSURANCE



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STATE ____________________ ZIP __________

President's Message

Mr. Speaker, President-Elect Cooper, Chairman Nelson, Officers, Councilors, Delegates, Ladies and Gentlemen:

It is indeed a pleasure for me to speak to you this morning. It was not without significant challenges and issues that I started in this position as President of the Missouri State Medical Association last year. It is not without significant issues and challenges that I finish my term as your President.

It has truly been an honor and a pleasure traveling from Mexico to Joplin, from Mound City and the Squaw Creek Goose Hunters Inn to Sikeston. I found that it is, indeed, a very diverse state.

It was a pleasure to meet with you over the past two years in your county and component medical societies.

I sense a degree of commitment and energy from these organizations, from the county and component society and through the state society, to the AMA. I think with the challenges and issues that confront us, I look forward to these, not that we're going to win them all, but that we can keep swinging at a number of these issues.

I would like to lump the problem together into one category and I think it is best termed the polarization of our profession. I think that the attempt is largely coming from our federal government.

We used to see in the papers a report coming out about every three months, it seems like, in the negative sense affecting medicine. It seems as if reports are coming out about every week now that affects negatively our practice and our profession.

I think that we can overcome this polarization in our medical profession by maintaining our professionalism. This is a comment that I made at the St. Louis Metropolitan Medical Society.

Larry Piepergerdes, M.D.

To that end over the past year we've had a number of activities of the Missouri State Medical Association. One of which I am very proud of is the strategic plan for the Missouri State Medical Association, the outline of which you'll find in the section of Officers and Delegates in your handbook.

I think this is a good outline and a good road to follow as we're progressing in the years to come.

The professional liability crisis remains a significant issue. We met with success two years ago. We did have a four-year moratorium. Some of the issues we were able to get passed in the legislature with unheard of rapidity and signed into law by the governor and so far has not been challenged, to my knowledge. That was a significant advance in the movement made by your state society.

I think there are other things that we need to be geared for in the future regarding professional liability.

Just last week we had a crew that went to Chicago to meet with the AMA to look at the AMA's proposed plan of administrative hearings to handle the professional liability crisis. We're looking to see if that would be a match for our state.

It is my understanding from the AMA that they would like to have one or two states try this to see if it would be a potential answer.

I think that, barring that, there are other issues that we need to address upcoming in tort reform. Number one is the contingency fee for the attorneys. Ours is the only industrialized western country that has a contingency fee.

We need to look at collateral sources. We need to look at other liabilities, self-encapsuled awards, and we need to look at the possibility that perhaps if we have Medicare maybe they need legal care to handle this.

These are some of the options that I think we need to investigate and look at.

I think there are other areas that perhaps we could get the government off of our back if we could get these two items adopted:

Number one, in 1986 there was a report given to the AMA House of Delegates which passed without a dissenting vote. It was for four MM's and the Board of Trustees. It was the culmination of three years of very vigorous work by the Council on Medical Services and the Council on Legislative Affairs of the AMA and also the Board of Trustees.

The title of it was Refinancing Health Care for the Elderly.

Basically, what the House of Delegates passed was the concept of refinancing. We all know that Medicare is going to go bankrupt. We just cannot increase it fast enough; that this needs to be changed and changed along the line of having a voucher system of increasing the percentage of participation by the employer from 1.45% to 2% and increasing the participation by the employee from

Continued on page 368

Larry G. Piepergerdes, M.D.

1.45% to 2%; of having a trust fund that is publicly administered. Barring October 1987, hopefully, we can make some money that would be prospectively funding this.

I think it was a landmark decision on our part. I hope that we can get that in front of our legislators in Washington and get that passed.

From a state position, we have two significant areas that we can deal in:

One is called MedAssist. The bill was passed last year, but there was a lack of funding for it. I talked with Bert this morning. It is back in the hopper. It probably will be passed this year and placed in front of the voters of the State of Missouri as a referendum vote.

This is the medically-near indigent, those that fall within 150% of the federal poverty level. The federal poverty level is approximately $10,000. If you make $15,000, you would fall in this category. That includes 27% of the population of the State of Missouri. In Northeast and Southeast Missouri, it is 41% in both of those areas. People that do not qualify for Medicaid but don't have enough money to buy their own health insurance.

It is my understanding at this time that what would be put before the voters would be financed on the basis of a ⅜% sales tax and a 10% lug on the personal income tax.

Another area that we have interest in is Medicaid. We have consistently been getting the short shrift on Medicaid. We're less than 20 cents on billing.

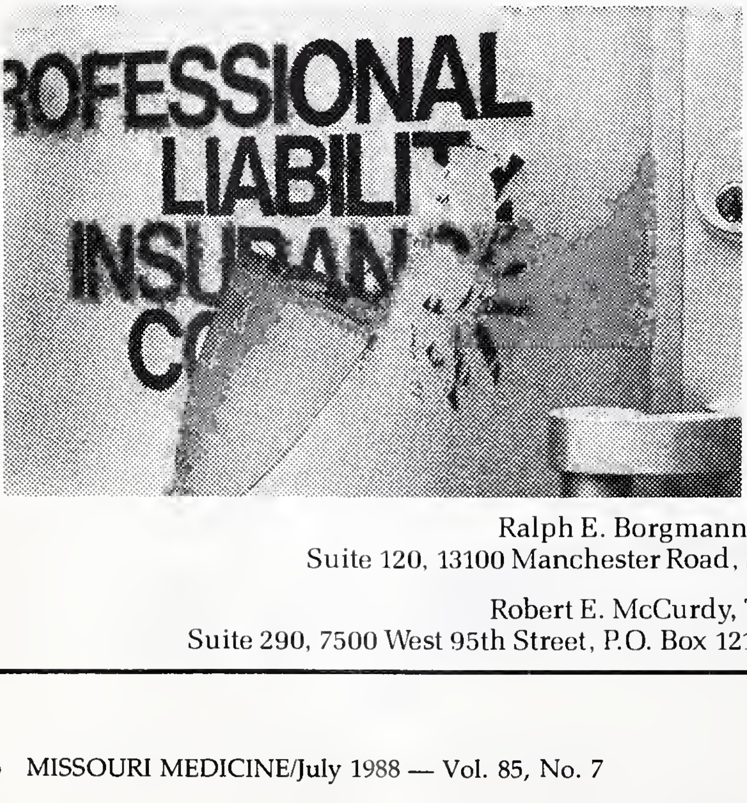
Last year through very vigorous work we passed a $2.2 million package. The governor cut that to $1.1 million for Medicaid. This year we asked for $1.6 million and the governor came back with a recommendation $187,000. This is just not going to make it.

The Hospital Association executive committee and our executive committee of MSMA and the Osteopathic executive committee have been having meetings at least twice a year. The Hospital Association realizes that even though they are getting a bigger slice of the pie, that if the doctors are not involved in the program, it is not going to make any difference to them. They're very supportive of the rare indictive that we're taking now and that is the conclusion that we reevaluate and get some hard figures and data regarding Medicaid to bring that back and to present that and see if we can't have another go at getting increased funding.

We are a low state tax state and I take no pride, no perverse pride, in that. But I think Medicaid does need to be revamped. I think this is the proper approach to take.

Again, I want to thank you for the opportunity to serve as your president. I look forward and I think the leadership is in good hands and I see good people coming up to take these slots. Again, it has been very much a privilege and pleasure to serve as your president. Thank you very much. ■

In ten years your malpractice carrier may be just a memory.



Unless it's Medical Protective.
The most important thing an insurance company sells is its promise to be here when you need help. Unfortunately, that's a promise that's easy to make, but hard to keep.

When you consider liability insurance, remember this. A company that's survived tough times before is more likely to come through a crisis period. And no company has weathered more of the industry's tough times than The Medical Protective Company because we pioneered professional liability coverage nearly a century ago.

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Suite 290, 7500 West 95th Street, P.O. Box 12128, Overland Park, KS 66212, (913) 381-4222

Presidential Inauguration Speech

Ladies and Gentlemen, Friends, Relatives and Colleagues, thank you for the honor of being chosen as the 131st President of the Missouri State Medical Association. It is truly one of the highlights of my life. As is customary, a few words are expected at this time — the fewer the better.

To use another's theme "These are the best of times — these are the worst of times." These are the best of times because it is the age of medical miracles. "The blind shall see" — corneal transplants are now commonplace. Everyday hundreds, perhaps thousands, of individuals have cataract surgery with lens replacement. Truly those who were blind now do see. "The deaf shall hear" — with cochlear implants, as well as the more numerous but less complicated procedures, those who were deaf now do hear. "The lame shall walk" — by now, most everyone knows someone or of someone, who has had a major joint replaced. Many times you bump into them on the dance floor. Truly, the lame do walk.

Perhaps because of medical miracles becoming commonplace, expectations of a miraculous cure in every case have helped make this the worst of times. Ever increasing numbers of suits for alleged malpractice are in part due to our ability to deliver some miracles, but not in every case. The patient's expectations are now greater. Third party intrusion into the practice of medicine is increasingly onerous. 20-20 hindsight dogs us at every step.

T. J. Cooper, M.D.

With this seems to be the concept that, in medicine, something for nothing should be the norm. The third party payors are increasingly shrill in their insistence that their clients should receive all the modern miracles, but the cost of providing these miracles should be borne by some other entity.

Our society worships at the altar of success, but a successful physician has now become suspect. It seems that our detractors are more dedicated, more visible, and have more access to the media than we can ever obtain. Recently, when the Part B premium for Medicare rose 39%, the media was filled with interviews blaming the doctors. In truth, the inpatient procedures that were shifted to the outpatient setting accounted for the majority of the increase in Part B cost. This piece of information has no media appeal, and is usually ignored. And so it goes.

The AIDS epidemic is also deserving of inclusion in the "worst of times" because it is the first new disease recognized in recent times that to date is incurable, and considered universally fatal. It continues to use an increasing amount of both time and money, and unless society changes its high-risk behavior, and protects itself against this virus, more and more cases will develop. Education as to how the disease is spread, and how to prevent its spread, are a top priority of medicine. How the HIV alters the clinical course of many of our common disorders is of great importance to physicians and patients.

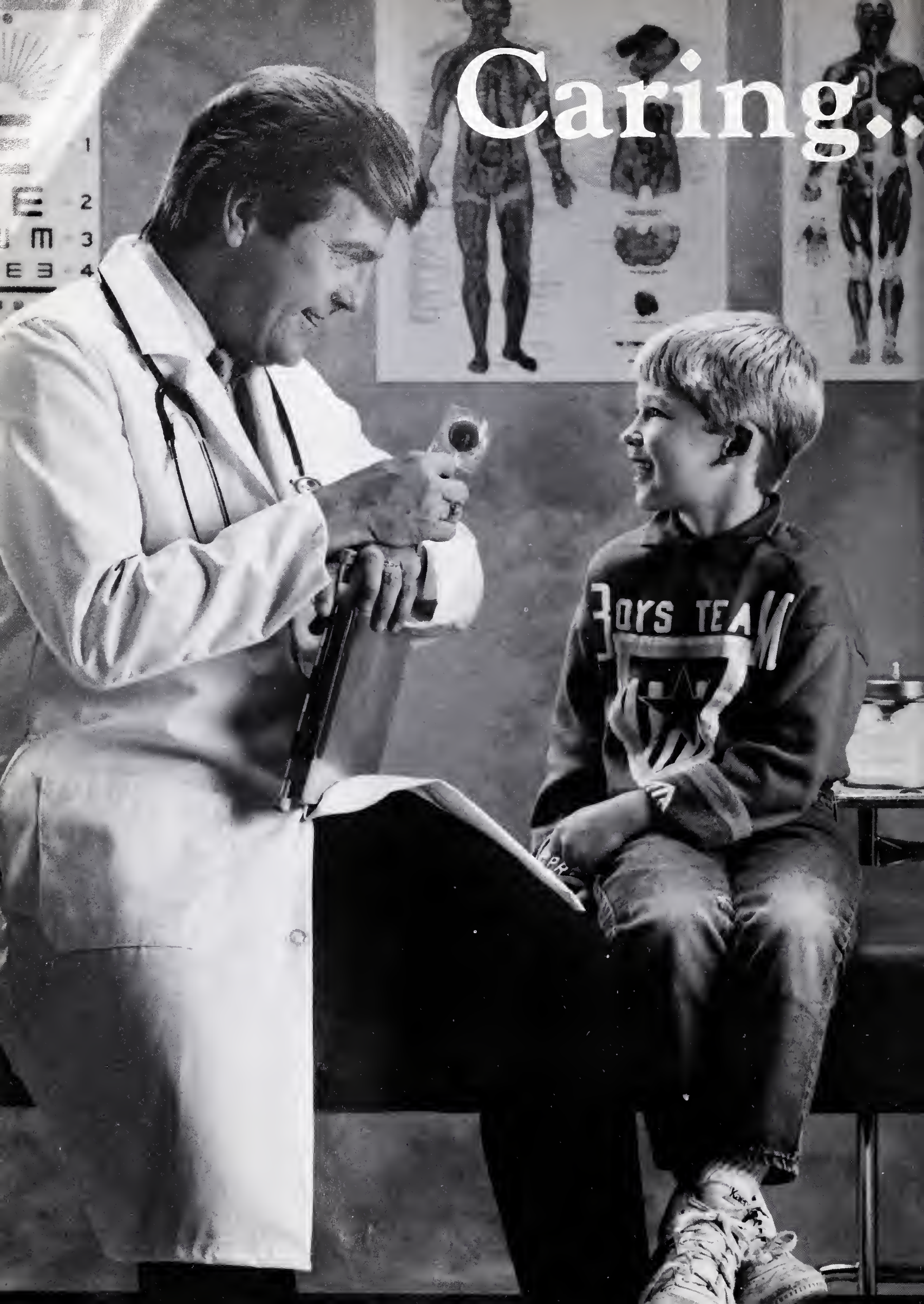
I would like to end this on an upbeat scale. Although the majority of physicians are attuned to their patient's financial situation, and do accept Medicare's assignment of benefits in selected cases, we are the subject of frequent criticism in this regard. In order to give credit where credit is due, I will work with other interested parties to develop a "Doctor Card" system to provide that those individuals with incomes one-and-one-half times the poverty level will receive assignment with no other billing except the 20% co-payment mandated by Congress. All Missouri State Medical Association members will be given the opportunity to participate in this program.

Again, thank you for this honor, and I will do my best to pass the torch to my successor about this time next year undimmed and untarnished.

Thank you. ■

T. J. Cooper, M.D.

Caring...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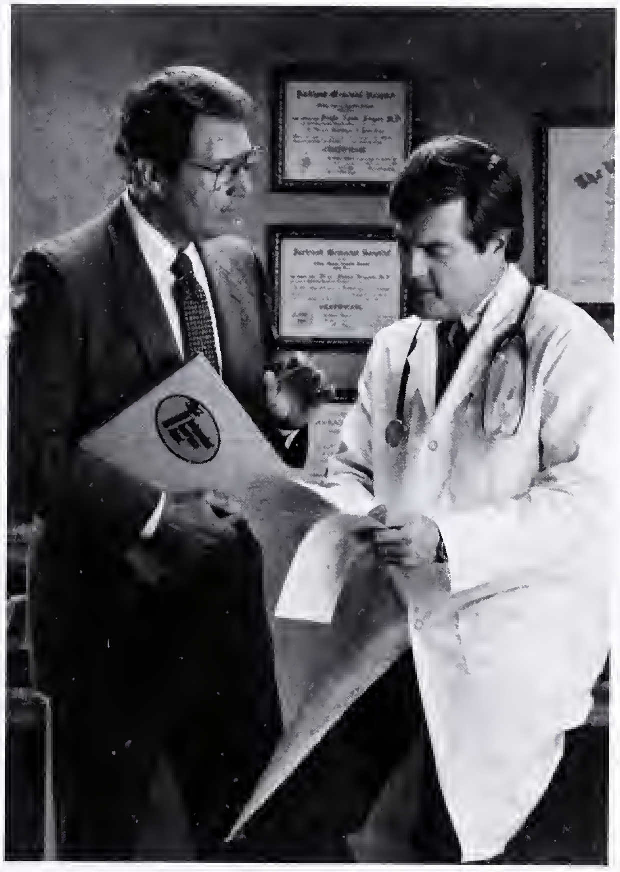
BOYS TEAM

...the Cornerstone of Our Professions

At times your caring attitude goes further in healing a patient than all the pills and bandages ever could. Your patient senses that genuine concern you have for him-concern manifested in the often herculean efforts you make to aid him in recovery. After all, caring is the cornerstone of your practice.

Occasionally a company appears with the same caring approach whose purpose is to serve the *doctor*. In the field of professional liability insurance, that company is Insurance Corporation of America. Like you, we make caring for our insured the cornerstone of our stable and successful business. And our ongoing efforts to cure malpractice ills are unmatched in the industry.

If you're tired of dealing with an insurance company who's more concerned with your premium than with your practice and reputation, call ICA. You'll receive the kind of care you deserve.



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713 (871-8100)
Houston, Texas

Auxiliary Report

Good morning.

To stand before this distinguished audience composed of physicians, dedicated not only to the practice of medicine but also willing to give of their time to promote and nurture their profession, is indeed a humbling experience for me.

As President of your Missouri State Medical Association Auxiliary, I thank you for allowing me the time to share with you some of the Auxiliary's accomplishments, frustrations and rewards of this past year.

Improving the image of the physician and his family has been one of our top priorities. By stressing the need for community involvement, visibility in health projects and positive media presentations, it appears that we have increased the awareness of the medical families in our communities.

Our membership expressed a need for leadership development, realizing that in today's world one must not only know the facts but how to present them. Leadership training sessions have been held and AMA workshops have been promoted throughout the State.

Organizational coalitions were formed for public speaking on health issues and sessions were held on legislative involvement and political action.

More involvement on the county level between medical societies and their auxiliaries has been stressed, encouraging your medical societies to invite your county auxiliary presidents to serve on the county society and to present their report. We have made gains in this area but we still have a ways to go.

Sandy Mitchell

With the support of the Missouri State Medical Association, its officers and its staff, the Auxiliary has been invited to attend local council meetings and we have traveled with the state president, president-elect, and council chairman. This has been most helpful in reestablishing communications within our state.

A concerted effort has been made to keep our membership updated on changes in medicine, new procedures being developed, and new terminology being used so that we can better represent you, the physician, in our community.

Exciting community projects have been developed. In Cole County a teen suicide prevention program was established in the school system as well as a program for peer pressure reversal.

The Auxiliary involvement in these programs reinforces the medical profession's stand for preventive medicine and has created invaluable good will within our communities.

In Kansas City, the high school health awareness sessions have been handled dealing with teen sexuality. Reproductive anatomy, birth control, and sexually transmitted diseases are topics that were covered.

Working in association with the University of Missouri-Kansas City medical students, the Auxiliary has developed a video tape which will be available to all Missouri high schools demonstrating how an effective teen sexuality program can be established which is medically correct.

It is my honor to represent you and Missouri at the regional and national White House Conference for a drug-free America. At this meeting we were able to develop a statement which will be presented to Congress and the President outlining the American people's expectations for control of illegal drugs and for those who use them and abuse them.

Legislatively the Auxiliary remains on the scene, writing letters, making personal contacts with our legislators, and keeping our membership informed on issues relating to medical legislation.

I appreciate the fact that some of you may feel that medicine is not what it used to be. I, too, am from the good old days of medicine. However, we in the Auxiliary feel and will continue to feel that this is the best profession in existence.

After working with Missouri's medical students, I can assure you that the doctors of the future are what we want them to be and that medicine is in good hands. These students are interested in their patients and their patients' welfare and in medicine as a profession, not as an occupation.

As I continue on with our advocacy role of the Auxiliary, I would like to remind you that your dreams are our dreams, and your disappointments are our disappointments as well as your worries being our worries. Together as medicine's practitioner and as medicine's advocates, we can and will maintain the quality of medicine that our patients anticipate as well as the professional image we strive to attain.

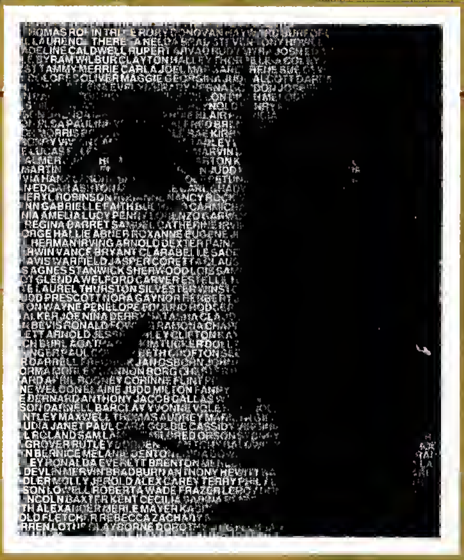
I thank you for your support that you give to the medical auxiliary and I wish you a most successful, gratifying 130th annual convention. Thank you. ■

Sandy Mitchell

EXPECT YOUR NEXT PATIENT ON INDERAL® LA TO...

(PROPRANOLOL HCl)

LONG ACTING CAPSULES 60, 80, 120, 160 mg



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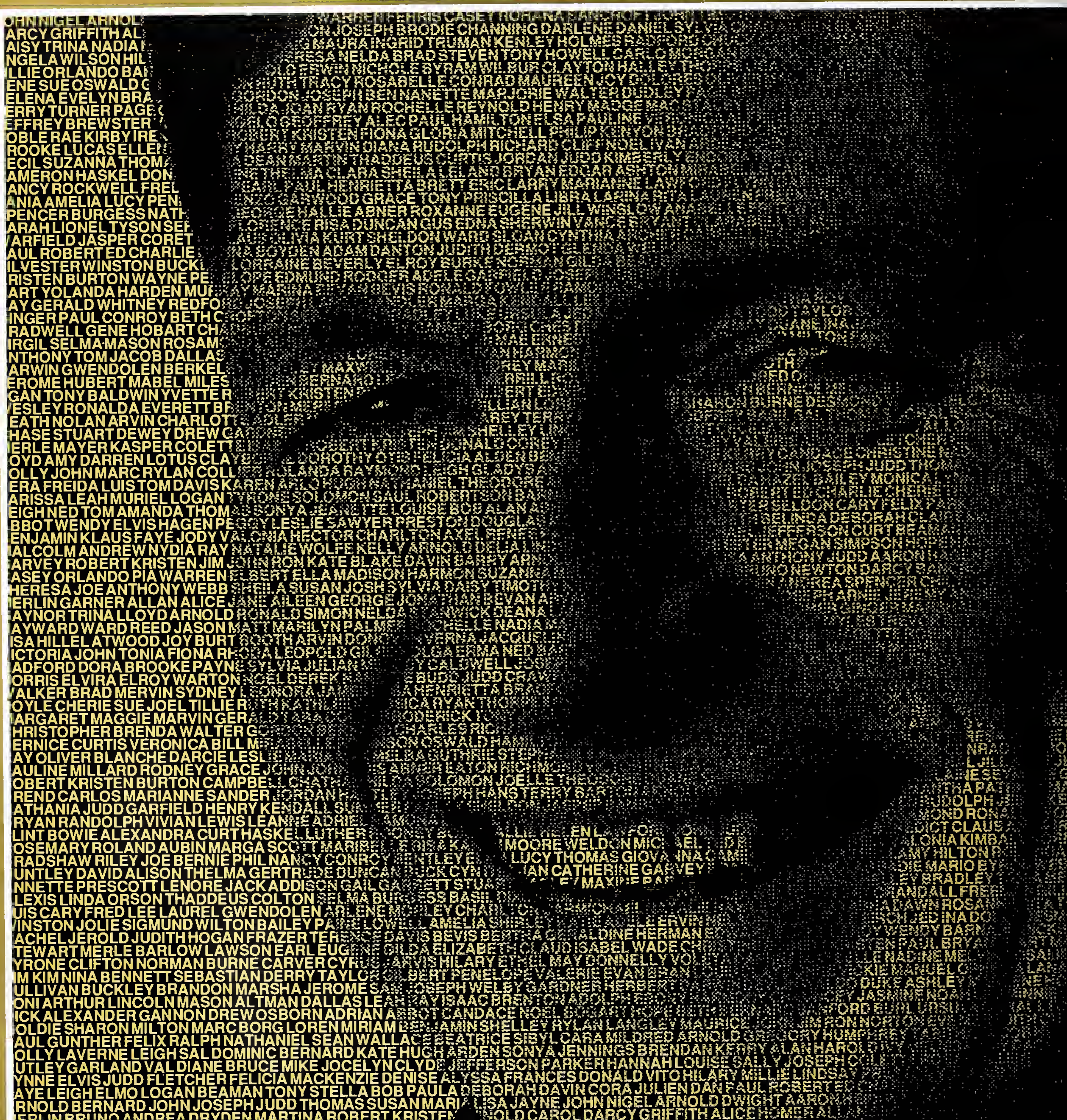

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...like the more than one million patients who have received INDERAL® LA.

In a recent survey, 4,120 participating physicians gave us their views[1] on INDERAL LA in the treatment of hypertension, angina and migraine.

INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated INDERAL LA good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe INDERAL LA.

INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with INDERAL LA to be as good as, or better than, other beta blockers.

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES
60, 80, 120, 160 mg

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

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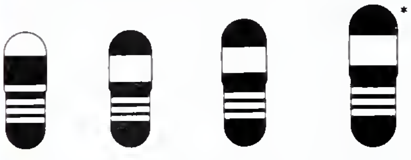
ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl) LONG ACTING CAPSULES 60, 80, 120, 160 mg

The one you know best keeps looking better



BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 an reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported i which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a deman pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaire hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be tol that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return o increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The adde catecholamine-blocking action may produce an excessive reduction of resting sympatheti nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardia contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of beta blocker and verapamil has resulted in serious adverse reactions, especially in patients wit severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels o both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly wit propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in anima studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be use during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

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PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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Reference:

1. Data on file, Ayerst Laboratories.

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Alan R. Nelson, M.D.
Chairman, AMA Board of Trustees

Thank you very much, Dr. Piepergerdes, Dr. Cooper, and fellow physicians. It is a pleasure to be here. Hugh Ritter, a long standing friend with whom I served on the board when he was a member of the Board of Trustees, often told me about what a fine society he represented — and I agree. In my discussions last night with some of your members, I was most impressed with your leadership and as I look over your handbook, it seems to me that you are right on target.

As I travel around the country, I see a level of anger and frustration. I wonder what happened to the idealism and hope that we were full of when we entered this profession. After some thought, I think I can identify two of the reasons for the anger and frustration. Perhaps I can also identify some strategies that we can employ to turn this around so that we can leave a legacy for those who follow us like Sandy referred to and like Dean Stoneman wished for.

The first reason for our discouragement is the erosion of our professional autonomy. The second is the emergency of the siege mentality that we feel because of the professional liability crisis.

By erosion of professional autonomy, I mean the uncoupling of authority and responsibility. In the eyes of the family, we still have the responsibility for the patient in the coronary care unit, but the authority is being taken away from us by the intensive care nurses. In addition, the health plan for home health care is being developed by home health planners while physicians still have the responsibility of that care.

We have the responsibility for the prescriptions that our patients take. That authority is being eroded by pharmacists who want to prescribe.

Managed utilization is a euphemism that covers the whole range of detraction from our decision-making responsibility beginning with prior authorization, going through mandatory second opinions, going through discharge planning, concurrent stay review — all the way right through to the end with the exclusive contracting.

Barry Ivy photo

Alan R. Nelson, M.D., and his wife Gwen pose with Jo-Ellyn Ryall, M.D., at the 130th Annual Convention in Kansas City. Dr. Nelson is serving his second term as chairman of the AMA Board of Trustees.

Consumer advocates harangue us about the decisions we make. The public is being bombarded by "health information," that is conflicting and sometimes downright wrong. And all of it reflects in a negative way on our authority to continue to provide our patients and the public with accurate health information.

The siege mentality comes because we are not prepared for the kind of confrontation and conflict that the professional liability situation presents. The basic core relationship between physicians and patients has traditionally been based on caring and trust, but is now being replaced by feelings of suspicion and doubt.

So what can we do? We are not helpless. Our strength and the ability to turn this around depends on having tough, united organizations on the local and national levels with broad support from their membership. These organizations must be willing to take risks in order for us to preserve our professional autonomy.

We have to pose a triple threat. That means we chase them in the halls of Congress. Then, we chase them through the regulatory process. And if that doesn't win, we pursue them through the courts. We have to be willing to sue the government.

In response to the 300,000 unnecessary services letters that have gone out, Rich Dean, one of our Washington staffers, has been birddogging to the degree that the administration now refers to the medical necessity provisions as the Rich Dean provisions.

Out of that persistence and vigor has come some changes. A memorandum went out to the carriers saying that those letters should no longer go out for services that are not Medicare-covered benefits. Many of those letters were for those services that weren't covered in the first place.

AMA has been seeking to delete

those provisions through amendments since 1986 when they were passed. The conference committee was not able to make changes in the law to delete it.

But another memorandum has just been mailed to the carriers, which called on them, before a letter goes to a patient, to "prove the claim." This means the carrier must have adequate information to make a determination of medical necessity and then give the physician an opportunity to respond before the letter to the patient is mailed.

Unity is necessary as we become more and more embroiled in reimbursement issues. The fragmentation potential is there to weaken us so that we may not be able to continue to hang onto the kind of system that we value — a pluralistic system with a schedule of payments and an indemnity payments system as an option.

In 1946, when the British put in their national health service, Iran Bevan, who was Minister of Health, commented that the way to get the cooperation of the consultants in a national health service was to "Stuff their mouths with gold."

That should be a lesson to us. In the coming years when our system of keeper service comes under increasing attack from government as well as business, it is important that we are able to sit down and reason together for the common good of our profession.

We have to evaluate these systems of managed utilization and be very quick to point out the instances in which they infringe on our ability to provide high-quality care to our patients.

Let me emphasize that our adversary in this part of our business in the future is not just going to be government. It will increasingly be business as they embrace these systems of "managed utilization" which are really intended to provide some bureaucratic obstacles to legitimate patient care in many instances.

President Piepergerdes has pointed out that there is an administrative model as an alternative to tort reform that a number of states should seriously study.

Our strategies must involve us forming partnerships with our patients and those who represent our patients. Again, your president referred to the need for us to attempt to implement ways to identify truly needy patients who require our consideration for assignment on a case-by-case basis. We have to work with those who represent the indigent to provide ways to care for the 37 million people in this country who do not have access to health insurance and require some level of consideration from us.

Finally, we have to understand that the future Dean Stoneman referred to rests on the confidence our patients have in us. We need this confidence in order for us to face the future of our profession with some optimism and reflect that optimism to those we are teaching. That confidence, in turn, involves us renewing on a continuing basis, our commitment to the essential elements of professionalism. These elements are first, a commitment to a never-ending education, second, a commitment to quality peer review to evaluate the quality of care that we and our colleagues provide and third, the willingness to put the welfare of our patients above our own economic self-interest.

If we remember these principles of professionalism, we can continue to retain the joy we experience in practicing and providing care to our patients. We can avoid becoming simply suppliers of a product neither trusted nor esteemed by those we serve. And with the technology that the future will provide for us, the opportunities for a truly fulfilling professional life will still be with us. ■

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Continued on next page

Exhibitors *Continued on page 375*

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Robert G. Harmon, M.D.

Director, Missouri Department of Health

Thank you very much. Madam Speaker, Mr. President, Delegates, Staff and Guests. I would like to bring you greetings from the Missouri Department of Health and greetings and best wishes from Governor Ashcroft.

As an MSMA member, I am pleased to address the House of Delegates and bring you up-to-date on happenings at the Department of Health across the state for the past 12 months.

The Department of Health is now two-and-a-half years old. Our mission is, as always, to serve you and all of Missouri citizens to improve the public health.

We are grateful for the input of the MSMA staff and membership. We certainly meet regularly with Royal Cooper, Cork Swarens, T. J. Cooper, and other officers to work together on numerous bills before the General Assembly. I will mention some of those in a moment.

We also appreciate the input of many of you MSMA members to the many Department of Health advisory committees and councils, such as the Board of Health Family Practice Residency Panel, the Crippled Children's Service Advisory Group, Emergency Medical Services, and many others.

I would like to review for you some of the health statistics for 1987. Time doesn't permit in-depth analysis. We will be publishing these. I think you will have a chance to read them.

In 1987 we saw improvements in:

Infant mortality came down to 10.2, down from 10.6 the previous year, but it's starting to level out and we have to work harder on that.

Improvements in accidental death rates. Homocide, which is an important trend, downward. Missouri, unfortunately, has the highest black male homocide rate in the nation, especially in St. Louis.

We saw improvements in the teenage birth rate. That continued to come down.

On the morbidity side we saw improvements in the gonorrhea and syphilis rate, although we did see an increase in the penicillin resistant gonorrhea rate in Missouri.

We also saw an improvement in the haemophilus botulism influenzae type b meningitis rate, hopefully related to the availability of the new vaccine and the administration in rural practices. That was the good news.

On the other hand, we saw worsening in such things as the cancer and chronic obstructive lung disease death rates, especially lung cancer death rates. Those are disturbing increasing trends and they are not getting better fast enough. Obviously, we have to do more about smoking.

We also saw a worsening slightly in the stroke and heart disease death rate, which suggests that the major gains of the 1970's may be slowing down, may be leveling out there. We'll have to work much harder on such things as smoking, cholesterol, and high blood pressure.

We also saw a worsening in the suicide rate and the distressing thing there is, while the older adult suicide rate comes down, the teenager and young adult rate is going on. We have to do more in our practices to counsel families and look toward warning signals in young Missourians.

On the morbidity side, we were not pleased to see a big jump in the rate of AIDS. We saw 239 new cases of AIDS reported by my colleagues in 1987, up from 91 in 1986, for a 163 percent increase, which puts us way above the national average and we are going through what the East and West Coasts went through several years ago. Also there is a new definition increasing case count.

We saw increases in hepatitis, especially "a," where there were numerous outbreaks across the state, showing the need to do more disease reporting promptly by physicians. We also saw increases in Hepatitis b.

There were outbreaks in measles across Missouri. We saw the biggest case count in years, especially in Central Missouri. There were increases as well in tuberculosis for the first time, only a small percentage of which was related to AIDS.

We also saw an increase in out-of-wedlock births. Teen births down, out-of-wedlock births up. Which does not bode well for the future of young Missourians.

Now, what are we doing with you to try to intervene in some of these adverse statistics?

You are well aware of the crisis in infant care, in obstetric care, across the state. We are pleased that Governor Ashcroft supported and the Legislature enacted expansion of the Medicaid eligibility for pregnant women and young children up to one hundred percent of the federal poverty line. That started in effect January 1. And an increase in obstetric fees under Medicaid.

Also saw opening up state legal expense for state provided malpractice insurance for private physician's for maternity child services and contracted with local health department for minimal or no compensation. That started last September. We're trying to work out some of the bugs in that program. We do have over 100 physicians now enrolled for the malpractice coverage.

We have defined minimal compensation at $40 an hour or up to 85 percent of Medicaid fee for service. We are now working to increase that up to 100 percent of Medicaid fee for service, essentially to cover any kind of Medicaid terminal child health care if the physician is signed up by the local health department.

We also got approval to hire some district physicians in Southwest and Southeast Missouri to work with you to improve access to maternal and child health care. Also we have hired some more nurse practitioners to work in local health departments with you.

For AIDS, June of '87, the Governor endorsed and the Department of Health announced an eight-point plan to combat the AIDS epidemic in Missouri. I'm pleased to say that we seem to be on the cutting edge of where federal policy is headed. And that plan includes some of the following:

Reporting of confirmed HIV antibody positive blood tests to the Department of Health to promote contact tracing. We worked with you on that. We amended the rule as you advised and we now have over 200 positive reports that have come in with confidentiality maintained.

We are embarking on a big increase in blood testing and counseling with you. We are still doing free blood tests at the State Public Health Laboratory that you send in to us. A majority of our tests are coming from private sources. We are now expecting 20,000 to 30,000 blood tests to be performed this year at the State Lab. We do think that even more than that are being done, by the way, in private labs across the State.

A big increase in public and patient and professional education will be going on. The recommendations also are for increased confidentiality and protection against discrimination.

Those measures have worked their way into legislation which is now before the House and Senate and we are working with MSMA to make it the right kind of legislation and we do expect something will pass.

A budget increase for the Department of Health to prevent AIDS has been recommended. It may be as high as $4 million in Missouri for the next fiscal year starting July 1 to pay for the provisions of this eight-point plan. That is not even counting the Medicaid spending or the private sector spending on the medical care and the long-term care for AIDS victims.

We are also pleased to have co-sponsored a teleconference with MSMA and the Dental Association. Those video tapes are available on how to deal with AIDS in your practices and in your hospital settings.

Next March 28 through 30th, we will have an AIDS '88 conference in St. Louis. We hope some of you will have a chance to attend that. Dr. James Mason, the Director of the Center for Disease Control, will be the keynote speaker on the evening of the 29th. Also on AIDS I will be presenting tomorrow at 1:30 at the Family Practice scientific session, if you would like to get more in depth into the AIDS situation.

We also were pleased last year that state funding was approved for the first time for family practice residency training. There is an advisory panel and now $140,000 has been distributed for resident support and additional money has been recommended by the governor for the next budget year.

We have a challenging court case in Southwest Missouri which is going on right now. It is known as the Cruzan case. It's a matter of right to die. The family has requested discontinuation of a stomach feeding tube. It has gone to court and the whole nation is watching to see if the court will rule that the tube should be removed from this patient who has been in a persistent vegetative state for five years. You may have been reading about that in the newspapers.

We expect the court's ruling in a couple of months. It will probably go through appeals and take well over a year to resolve.

On the tobacco front, the Department of Health and the Department of Social Services went totally smoke free on January 1. We encourage you to consider similar measures in your offices and hospitals. Other state departments are expected to follow in the next two or three months, including Labor and Industrial Relations, Natural Resources, Elementary and Secondary Education.

On the legislative front, I mentioned we're pursuing comprehensive AIDS legislation. Also additional support for public hospitals and those serving disproportionate share of Medicaid patients. We are following the MedAssist legislation, the newest version of that, and it could be that something will pass and go on the ballot to provide a state-subsidized plan for the uninsured.

We appreciate any support you can give us on requiring immunization for preschoolers. We are trying on that this year. There is this year again a Clean Indoor Air bill which will provide no smoking in many public places or the work site except in designated areas. We're seeking a tax on smokeless tobacco. There is no tax currently in Missouri.

An interesting issue has arisen about infectious waste or the disposal thereof. We are working with MSMA on how that would be handled in a small generator: private practices, local health departments. We hope to keep you from any onerous regulatory burden that won't necessarily affect your practice.

Finally, Representative Bland is the sponsor of the bill for a DOH Office of Minority Health, which we hope would lead to special programs to intervene and lessen the unfortunate disparity in black and white morbidity and mortality.

In conclusion, I will be around this evening and throughout Saturday. Please talk to me if you wish. I will be presenting tomorrow on Reporting of Communicable Disease as well as AIDS. I have been traveling around the State. I have now visited all 113 local health departments. I recently spoke to the Ozark Medical Society in Southwest Missouri. I will be pleased to speak to your county medical societies if you will call my office at 751-6001. The department of Health looks forward to another productive year of working with MSMA. Thank you very much. ■

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C I B A

References: **1.** Data on file, CIBA Pharmaceutical Company. **2.** Skoutakis VA, Acchiardo SR, Wojciechowski NJ, et al. Liquid and solid potassium chloride: Bioavailability and safety *Pharmacotherapy* 1980;4(6):392-397 3. Skoutakis VA, Carter CA, Acchiardo SR: Therapeutic assessment of Slow-K and K-Tab potassium chloride formulations in hypertensive patients treated with thiazide diuretics. *Drug Intell Clin Pharm* 1987;21:436-440.

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1 For therapeutic use in patients with hypokalemia with or without metabolic alkalosis; in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For prevention of potassium depletion when the dietary intake of potassium is inadequate in the following conditions. patients receiving digitalis and diuretics for congestive heart failure; hepatic cirrhosis with ascites; states of aldosterone excess with normal renal function; potassium-losing nephropathy; and certain diarrheal states.

3 The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases In more severe cases supplementation with potassium salts may be indicated

CONTRAINDICATIONS
Potassium supplements are contraindicated in patients with hyperkalemia, since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene) (see OVERDOSAGE).

All solid dosage forms of potassium supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract In these instances, potassium supplementation should be with a liquid preparation. Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to an enlarged left atrium

WARNINGS
Hyperkalemia (See OVERDOSAGE).
In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally Potentially fatal hyperkalemia can develop rapidly and be asymptomatic.

The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction With Potassium-Sparing Diuretics
Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e g., spironolactone or triamterene), since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions
Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage, or perforation. Slow-K is a wax-matrix tablet formulated to provide a controlled rate of release of potassium chloride and thus to minimize the possibility of a high local concentration of potassium ion near the bowel wall. While the reported frequency of small-bowel lesions is much less with wax-matrix tablets (less than one per 100,000 patient-years) than with enteric-coated potassium chloride tablets (40-50 per 100,000 patient-years) cases associated with wax-matrix tablets have been reported both in foreign countries and in the United States In addition, perhaps because the wax-matrix preparations are not enteric-coated and release potassium in the stomach, there have been reports of upper gastrointestinal bleeding associated with these products. The total number of gastrointestinal lesions remains approximately one per 100,000 patient-years Slow-K should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs

Metabolic Acidosis
Hypokalemia in patients with metabolic *acidosis* should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, or potassium acetate.

PRECAUTIONS
General:
The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis *per* se can produce hypokalemia in the absence of a deficit in total body potassium, while acute acidosis *per* se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium.

Information for Patients
Physicians should consider reminding the patient of the following

To take each dose without crushing, chewing, or sucking the tablets.

To take this medicine only as directed. This is especially important if the patient is also taking both diuretics and digitalis preparations.

To check with the physician if there is trouble swallowing tablets or if the tablets seem to stick in the throat

To check with the doctor at once if tarry stools or other evidence of gastrointestinal bleeding is noticed

Laboratory Tests
Regular serum potassium determinations are recommended In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions
Potassium-sparing diuretics: see WARNINGS

Carcinogenesis, Mutagenesis, Impairment of Fertility
Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C
Animal reproduction studies have not been conducted with Slow-K. It is also not known whether Slow-K can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity Slow-K should be given to a pregnant woman only if clearly needed

Nursing Mothers
The normal potassium ion content of human milk is about 13 mEq/L. It is not known if Slow-K has an effect on this content. Caution should be exercised when Slow-K is administered to a nursing woman.

Pediatric Use
Safety and effectiveness in children have not been established

ADVERSE REACTIONS
One of the most severe adverse effects is hyperkalemia (see CONTRAINDICATIONS, WARNINGS, and OVERDOSAGE). There also have been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see CONTRAINDICATIONS and WARNINGS); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely

OVERDOSAGE
The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously. potentially fatal hyperkalemia can result (see CONTRAINDICATIONS and WARNINGS). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration (6.5-8 0 mEq/L) and characteristic electrocardiographic changes (peaking of T waves, loss of P wave, depression of S-T segment, and prolongation of the Q-T interval). Late manifestations include muscle paralysis and cardiovascular collapse from cardiac arrest (9-12 mEq/L).

Treatment measures for hyperkalemia include the following. (1) elimination of foods and medications containing potassium and of potassium-sparing diuretics; (2) intravenous administration of 300-500 ml/hr of 10% dextrose solution containing 10-20 units of insulin per 1,000 ml; (3) correction of acidosis, if present, with intravenous sodium bicarbonate; (4) use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity

DOSAGE AND ADMINISTRATION
The usual dietary intake of potassium by the average adult is 40-80 mEq per day. Potassium depletion sufficient to cause hypokalemia usually requires the loss of 200 or more mEq of potassium from the total body store. Dosage must be adjusted to the individual needs of each patient but is typically in the range of 20 mEq per day for the prevention of hypokalemia to 40-100 mEq or more per day for the treatment of potassium depletion. Large numbers of tablets should be given in divided doses.

Note: Slow-K slow-release tablets must be swallowed whole and never crushed, chewed, or sucked

HOW SUPPLIED
Tablets—600 mg of potassium chloride (equivalent to 8 mEq) round, buff colored, sugar-coated (imprinted Slow-K)

Bottles of 100	NDC 0083-0165-30
Bottles of 1000	NDC 0083-0165-40
Consumer Pack—One Unit	
12 Bottles—100 tablets each	NDC 0083-0165-65
Accu-Pak® Unit Dose (Blister pack)	
Box of 100 (strips of 10)	NDC 0083-0165-32

Do not store above 86°F (30°C) Protect from moisture. Protect from light.

Dispense in tight, light-resistant container (USP).

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C I B A

128-3568-A

Committee and Commission Reports

Ad Hoc Strategic Planning Committee

In April, 1987, the Council of the MSMA established an ad hoc committee to prepare a strategic plan that would guide the Association's activities over the next three to five years. The MSMA engaged the Health Policy Research Group, a Chicago-based consulting firm that later merged with the accounting firm of Coopers & Lybrand, to assist the Strategic Planning Committee by facilitating its meetings and conducting a survey of MSMA members.

The following report summarizes the Committee's conclusions and recommendations to the Council.

MSMA Membership Survey

The Council authorized a mail survey of a random sample of active MSMA members. The survey of 1,186 physicians was conducted during the summer of 1987, and was designed to elicit opinions about the Association and its future directions. The sample represented a cross-section of the membership.

The findings of the Health Policy Research Group survey showed that MSMA members are reasonably satisfied with the performance of the MSMA. They look to the Association to represent them in the political arena (listed as one of the "core attributes" of the MSMA), but only secondarily expect the Association to provide them with practice-related services. The sampled physicians do expect the MSMA to become more progressive and to achieve even more success in the future.

The Mission of the MSMA

In reviewing the results of the survey and comparing the results with past and present Association activities, the Committee identified a number of challenges facing the MSMA. These included maintaining and enhancing the Association's record of political successes in the face of increased competition from other interest groups; overcoming an image of being self-serving; communicating better with members while keeping from adding to the avalanche of information; and generating more involvement of individual physicians in the Association and its political activities.

Currently, the purpose of the Association is outlined in the MSMA Constitution and Bylaws:

> The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and, by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.

While the Committee supports the major concepts in this statement of purpose, it also saw a need for revision, so as to make certain ideas more explicit and up-to-date according to the Association's future directions.

The Committee recommended the adoption of the following Mission Statement for the MSMA:

> The Mission of the Missouri State Medical Association is to serve its members through promotion of the science and art of medicine, protection of the health of the public, and betterment of the medical profession in Missouri.

The Committee preferred this wording for several reasons. For instance, the statement declares that the Association exists to serve its members, a concept that is only implicit in the current statement. Also, the new wording removes the reference to collective bargaining, as the MSMA has not become a collective bargaining agent for physicians in the ten years since the reference was added. Finally, the statement avoids unnecessarily narrow interpretation of the phrase "public health."

The Committee stated that it believes this Mission should be used as the foundation for all MSMA activites. That is, each Association program and service must demonstrate that it furthers some component of the Mission. The Committee went on to use the new mission statement in directing the rest of the strategic plan.

In brief, the strategic plan takes the three major objectives in the mission statement, with certain specific recommendations to achieve the objective.

I. Promoting the Science and Art of Medicine

The direction encompasses a wide range of concerns, from formal scientific education to the profession's responsibility for ethical issues to practice and professional relations. The Association should continue to pursue an agenda that supports this broad definition. The five recommendations of the Committee follow.

1. Define the responsibilities of the medical profession in critical health care issues.
2. Develop an aggressive legislative agenda on emerging issues.
3. Educate physicians on the related areas of emerging political issues, media relations, and effect change at the local level.
4. Gain recognition for being the official accreditor of CME in the state.
5. Broaden the scope of *Missouri Medicine* to include practice and business-related topics.

II. Protecting the Health of the Public

The MSMA has carried the statement "protect the public health" as part of its purpose. Yet relatively few undertakings have been made in this area. The Committee pointed out that this objective can be most important. First, members' expertise and experience in health issues should be used. Also, it is important to demonstrate the profession's sincere concern for the welfare of the Missouri public. Finally, carrying out this objective would build goodwill for the profession and Association as it furthers its other goals.

The Committee recommended seven initiatives to help accomplish this objective.

1. Define the responsibilities of the government in critical health care issues.
2. Develop an aggressive legislative agenda on emerging issues affecting the health of the public.
3. Maintain a meaningful role in identifying, educating,

and disciplining (or rehabilitating) physicians who provide poor-quality care.
4. Develop a liaison with the state AARP chapter.
5. Educate the public about health issues.
6. Educate the public (and employers) about socioeconomic issues.
7. Work to improve school health programs.

III. Bettering the Medical Profession in Missouri

The new MSMA mission affirms that the Association exists to serve its members. One of the most important ways of accomplishing this objective is to work to improve the practice environment for Missouri physicians. The Committee developed eleven initiatives to help to do this.

1. Develop conceptual alternatives to the current tort and professional liability insurance system.
2. Develop an aggressive legislative agenda on emerging practice issues.
3. Re-invigorate the physician key contact program.
4. Intensify efforts to have physicians appointed to relevant state agencies.
5. Recruit more members.
6. Improve communication between MSMA and its members.
7. Conduct workshops for physicians and their staffs on "the rules of the game" (i.e. the business aspects of medical practice).
8. Intervene on physicians' behalf with third-party payors.
9. Establish a central credentialing information clearinghouse.
10. Assist hospital medical staffs in dealing with bylaws issues.
11. Provide guidance to members on general medico-legal issues.

Implementation of the Plan

The Planning Committee prepared a timetable for guiding the plan's implementation. However, recognizing that other demands on the Association and external pressures could influence the timetable, the Committee recommended that the Council review the status of the plan and update the timetable at least once a year.

Conclusion

From its intensive study over a four-month period of MSMA's present and future directions, the Committee has developed what it believes to be a forward-looking mission for the Association, and a set of innovative strategic directions to meet the changing needs of Missouri physicians. Using this strategic plan will enable the MSMA to remain a viable organization for the future while preserving the valuable traditions of the medical profession in this state.

The Committee recommended adoption of this report, and further recommended that the Council direct the Executive Committee to oversee the plan's implementation, including delegation of the Association's various Committees and Commissions the task of developing specific action plans; to transmit a report to the House of Delegates; and to arrange to inform MSMA members about the plan and its implications.

Larry G. Piepergerdes, *Chairman*
T. J. Cooper
Gary A. Dyer
Sam L. Farrell
Carl R. Kruse
Stephen C. McCray

Robert R. McDonald, Jr.
Phillip M. Hornbostel
Berry Ivy
Victoria Gunn
Frederick W. Hahn
Jay Meyer
Marvin A. Singleton

Commission of Public Affairs

The Commission of Public Affairs met on August 29 and November 8, 1987.

The Commission discussed several publications for production and reviewed text for brochures. Another important area of concern to the Commission members was the provision of unique membership services by the Association.

Accordingly, the Commission recommended applying a price differential to publications or services offered by the MSMA to non-members.

In other discussion, attention was turned to the problems and complexities of dealing with third-party insurers, governmental agencies, the PRO, and other practice-management issues. The Commission recommended the expansion of MSMA membership services to include an in-house staffer whose area of expertise would be these issues. The staffer would be responsible for developing a program to bring information to members, both on a regular basis and on an as-needed basis.

Public relations, always a topic of concern to this Commission, was discussed. Feeling that the Association could strengthen its program in this regard, the Commission recommended a program for special recognition of MSMA members be instituted. This would be a periodic awarding of a certificate or similar recognition, with the opportunity for press coverage, to point up to a special achievement in community or professional service.

The Commission agreed that public relations efforts could be helped by the input of the MSMA Auxiliary. It recommended that an Auxiliary member be appointed an exofficio member of the Commission each year.

After seeing an example of an article taken from another state's medical journal, the Commission recommended an informational article be published in *Missouri Medicine*, giving the how-to's of closing a physician's office practice. Reprints would then be made available to members who requested them.

Barry J. Bass, *Chairman*
R. Robert Hatlelid
Lawrence A. Rues
Robert J. Olson
Michaele M. Penkoske
H. Jerry Murrell
Edmond B. Cabbabe
Herbert K. Dixon

Michael J. Bukstein
Carlo P. Caciolo
Marla J. Tobin
Carl M. Myers
Fritz A. Byrun
Jo-Ellyn M. Ryall
William A. Turner
Robert T. Gibbons, Jr., *Councilor-Advisor*

Committee on Publication

The 84th volume of *Missouri Medicine* contained 29 scientific articles, eight special articles and each issue had an average circulation of 6,700.

In January 1987, *Missouri Medicine* added a new position, editorial assistant. Valerie Peters, a December 1986 graduate of the University of Missouri School of Journalism, began working on January 15. She coordinates the journal's advertising and subcriptions, but her primary responsibility is feature writing. "Controversy: HMO's in Missouri" was published in the October issue and "Where the Fault Lies" appeared in the December issue. Both of her articles received favorable comments from MSMA members throughout the state.

In addition to Valerie's feature stories, Volume 84 contained special articles on PRO issues in the January, February and March issues while an interview with the new

PRO president, William D. Bradshaw, M.D., appeared in the November issue. Philip Anderson, M.D.'s essay on the U.S. Constitution appeared in the July issue as well as an update on "Missouri's Changing Health Care System" by Robert G. Harmon, director of the Missouri Department of Health. All issues except the August directory issue and the July convention issue contained scientific articles by MSMA members.

Throughout the year, the cover of *Missouri Medicine* featured original artwork and photographs by MSMA members and Missouri artists. Special recognition came from Sandoz Pharmaceuticals who honored *Missouri Medicine* with an "honorable mention " in their 1987 Medical Journalism Competition. The journal was cited for excellence in design and editorial qualities.

The MSMA Council reappointed Jordan W. Burkey, M.D., of Springfield as editor and Donald G. Sessions, M.D. of St. Louis as associate editor.

The editors wish to express appreciation to all who submitted scientific manuscripts and to those who also contributed material and input to our journal. The complete financial report for the 1987 Journal, Volume 84, is included in the financial statement of the Missouri State Medical Association. The report is published in the March 1988 issue of *Missouri Medicine* and is included in the Delegates Handbook.

Jordan W. Burkey, M.D., *Chairman*
Donald G. Sessions, M.D.
Donald E. Menchetti, M.D.
John K. Layle, M.D.
Jerry W. Templer, M.D.
Earl R. Schultz, M.D.

Ad Hoc Committee on "Sunsetting"

The Ad Hoc Committee on Sunsetting met by conference call on January 14, 1988.

After reviewing the current MSMA policy manual, the Ad Hoc Committee members agreed to recommend the deletion of eight policies from the listing. These policies are:

1. *Board of Healing Arts* — The State Board of Healing Arts should be provided with a wide range of disciplinary powers, including requiring errant doctors to receive counseling or additional education. Also every state should be informed when any physician has his license suspended, revoked, or is placed on probation.
2. *CME Accreditation* — The MSMA supports the concept that continuing medical education accreditation should be conducted at the state level with the AMA as the only CME accrediting body.
3. *Home Health Care* — The concept of home health care and visiting nurses as a proper and economical way to bring quality health care to Missouri citizens not requiring more expensive acute care is favored by the MSMA.
4. *Licensing felon* — As a general rule, the MSMA opposes the granting of a license to practice medicine to any physician who has been convicted of a felony.
5. *Long-Term Health Policy* — The MSMA supports AMA policy which asks all physicians to voluntarily do their part in helping the country to economically recover.
6. *Osteopathic Physicians — Membership* — Both local and state medical societies may accept for full membership osteopathic physicians who are licensed to practice medicine in Missouri.
7. *Third Party Reimbursement* — The MSMA urges third-party payers, including the Division of Family Services, to establish economic incentives to physicians to encourage more in-office care. This would include payments for professional fees, laboratory and x-ray services, supplies and other ancillary services performed in a physician's office.

In addition, the Committee recommends that the following policy be reconsidered and possibly rephrased. The statute requiring a court order before ECT can be administered to an incompetent patient is still in effect. However, the intent behind this policy and the original resolution is unclear.

1. *Electroconvulsive Therapy* — The Association supports the deletion of requirements that legal guardians obtain court orders authorizing electroconvulsive therapy for patients that have been declared incompetent.

Carol F. Williams, *Chairman*
Arlen Winsky
David Barbe
Charles Barbee
Robert Tompson

Note: Meeting on Saturday, January 30, the MSMA Council adopted the foregoing recommendations 1-7 of the Sunsetting Committee and referred the item on "Electroconvulsive Therapy" to the Executive Committee.

Committee on Constitution and Bylaws

Report A

According to Chapter XV of the Constitution and Bylaws of the Missouri State Medical Association, the "Bylaws may be amended at any Annual Convention by a two-thirds vote of the delegates present and voting at that session, if the proposed amendment has been properly submitted to the House of Delegates and has lain on the table for one day."

Accordingly, the following proposed amendments are submitted by the MSMA Council for your consideration: (Bracketed words are deleted, underlined words are added.)

> Chapter III. Section 7. From among members of the House of Delegates, the Speaker shall appoint reference committees to which reports and resolutions, on a majority vote of the House of Delegates, shall be referred as follows:
>
> Reference Committee [on Amendments to the Constitution and Bylaws] A
>
> Reference Committee [on Resolutions] B
>
> Reference Committee [on Miscellaneous Affairs] C
>
> Reference Committee [on Medical Education and Public Welfare] D
>
> Reference Committee [on Reports of Officers] E
>
> The Speaker may appoint such other reference committees as he may deem necessary, upon approval of the House of Delegates.
>
> The President shall appoint a Committee on Credentials.

The reason for the above changes is for clarification. Over the years, the items referred for consideration by the House rarely fell readily within the definitions of the Reference Committees as currently titled. Changing the Reference Committee titles to A, B, C, D, and E would merely clarify that any issue could be referred to any Reference Committee.

> Chapter VII. Section 1. The Committee on Physician Rehabilitation shall consist of [Members of the Association] physicians and lay members appointed by the President for a term of three years. The Committee on Physician Rehabilitation shall plan and execute programs of professional assistance for members of this Association who

m require assistance to continue or return to their essional activities.

The reason for the above change is to permit representatives on the Physician Rehabilitation Committee from the Missouri Association of Osteopathic Physicians and Surgeons and the Missouri State Medical Association Auxiliary. MAOPS currently participates financially in the Rehabilitation Committee and this would allow representation. The Committee has requested that the Auxiliary also be represented.

Sivaprasad D. Madduri
Jagadishwar Devkota
James A. Murphy, *Chairman*
Linda Fisher
Douglas B. Bogart

Committee on Constitution and Bylaws

Report B

The MSMA Council reviewed the report of the Strategic Planning Committee and adopted changes in the Purpose (or Mission) of the Association.

The Council supports the major concepts contained in the current Purpose, but believes that it needs to be revised to make certain ideas more explicit and to take into account changes that have occurred since the Purpose was first adopted.

According to the MSMA Constitution, any article of the Constitution may be amended by a two-thirds vote of delegates present and voting in any Annual Convention, provided the amendment shall have been presented in the previous open meeting of the House and that the amendment shall have been published twice during the year in the Journal or sent to each component society at least two months prior to the meeting at which final action is to be taken. The proposed changes are presented for final action in 1989.

(The bracketed material below would be deleted while the underlined words would be added.)

Constitution

Article II. [Purpose]

[The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.]

Article II. Mission

The Mission of the Missouri State Medical Association is to serve its members through promotion of the science and art of medicine, protection of the health of the public, and betterment of the medical profession in Missouri.

Also, Chapter XVI of the Bylaws would be changed as follows:

Chapter XVI. [Purpose]

[The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.]

Chapter XVI. Mission

The Mission of the Missouri State Medical Association is to serve its members through promotion of the science and art of medicine, protection of the health of the public, and betterment of the medical profession in Missouri.

Commission on Continuing Education and Health Manpower

Specialties sponsoring scientific programs during the 129th MSMA Annual Convention were asked to provide, in addition to specific program information, needs assessment and program objectives to assure that physicians will continue to receive Category 1 credit for the scientific portion of the MSMA Annual Convention. Specialties will be asked, in the future, to provide similar information to their members prior to their respective programs.

While attending the various scientific programs during the 129th Annual Convention, MSMA member and guest physicians were able to obtain on Friday, April 3, 32 hours Category 1, 17 hours Prescribed Credit and 12 hours Elective Credit and on Saturday, April 4, 41½ hours Category 1, 19½ hours Prescribed Credit and 22½ hours Elective Credit.

The Commission will provide a program evaluation sheet that will be distributed at the various scientific programs in conjunction with the MSMA Annual Convention.

The Accreditation Council on Continuing Medical Education has reaccredited MSMA as a sponsor for Continuing Medical Education (scientific portion of the Annual Convention) for a four-year period.

The following were approved as a sponsor for continuing medical education:

Trinity Lutheran Hospital *Kansas City*	4 years
Boone County Medical Society *Columbia*	4 years
Greater Kansas City Mental Health Foundation *Kansas City*	2 years
St. Luke's Hospital *Chesterfield*	1 year
Freeman Hospital *Joplin*	4 years
Kansas City Southwest Clinical Society *Kansas City*	4 years

The MSMA Council forwarded Resolution #24, "Nursing Education" to the commission with the following Resolve:

> "RESOLVED, that the MSMA prepare an informational report on the continuation of the diplomate/associate degree in nursing, the curriculum of the LPN program, and these nurses' role, qualifications and training in providing patient care, so that adequate nursing care will be assured for all hospitals in Missouri."

During the AMA Interim Meeting, the House of Delegates adopted the Board of Trustees Report, "Nursing Education and Supply of Nursing Personnel in the United States." In this report, the Board of Trustees made the following recommendations:

1. Support all levels of nursing education, at least until the crisis in the supply of bedside care personnel is resolved.
2. Support government and private initiatives that would facilitate the recruitment and education of nurses to provide care at the bedside.
3. Support economic and professional incentives to attract and retain high quality individuals to provide bedside nursing care.

4. Support hospital-based continuing education programs to promote the education of caregivers who assist in the implementation of medical procedures in critical care units, the operating and emergency rooms, and medical-surgical care.
5. Cooperate with other organizations concerned with acute and chronic hospital care to develop quality educational programs and methods of accreditation of programs to increase the availability of caregivers at the bedside and to meet the medical needs of the public.

William D. Bradshaw,
Chairman
Turner L. Minnigerode
Dwight L. Deardeuff
George X. Trimble
Michael R. Freeman
Raymond O. Frederick
John Renner
Robert B. Brigden
W. Wayne Boydston
Luis B. Anglo
Edward R. Jenkins
Orlyn O. Lockard
Olga M. Blair
Victor G. Clever
Hiremathada Jayanandaiah
Gary A. Dyer,
Councilor Advisor

Committee on Legislative Affairs

With six weeks remaining in the current session of the Missouri General Assembly, several issues of importance to physicians and their patients remain to be acted upon.

Again this year the Legislature's interest in medical and health care matters surfaced as more than 250 bills in this area were introduced. Being an election year, nearly all these issues have received an airing and many have been heavily lobbied by concerned groups.

The Association is still unable to convince enough members of the vital importance of the legislative arena. While group after group of members of allied health professions, attorneys and other non-physicians become more involved with their legislators and with specific issues, physicians, by and large, continue to sit back and hope medicine prevails without making any effort to affect legislation.

Both the Senate and the House are still considering bills dealing with AIDS. The Association is trying to gain a balance in any bill passed so that the public is safeguarded while AIDS victims retain basic rights. It is a tough issue and one physicians should talk about with their elected representatives.

Another problem area deals with how physicians will be required to handle infectious wastes. There are proposals which will mandate that physicians' offices be forced to follow similar rules as large chemical companies which generate large quantities of hazardous waste. MSMA is seeking an amendment to the bill that would place reasonable requirements on the handling of infectious waste.

Although they are not yet dead for the Session, two bills which would limit physicians' practices have been stalled. One would require dispensing physicians to register with the Board of Pharmacy and dispense only "at cost." The other would prohibit physicians from employing physical therapists or owning an interest in a P.T. clinic. Pharmacists and P.T.'s are pushing hard for these bills.

It is a tight financial year for Missouri and physicians can expect little in increases from Medicaid. We do expect added funding for CPT-4 updates and anesthesia procedures.

The issue of state-funded insurance for the uninsured will probably be submitted to the voters rather than enacted as a bill. The program would be funded by increases in the state income and sales tax.

Attempting to list each of the 250-plus bills being considered is impossible here, but members are urged to contact Headquarters on issues of interest.

Remember . . . this is an Election Year!! If you want to make an impact on legislative matters, get involved NOW in the campaign of the candidate of your choice.

Physician Rehabilitation Committee

The Physician Rehabilitation Committee met on April 3, August 8 and November 14, 1987.

The committee discussed the feasibility of developing a separate cost center that would allow the committee to account for all income and expenses for the Physician Rehabilitation Program (PRP). This mechanism would enable the PRP to assure other organizations contributing funds to the PRP that these funds would be utilized in accomplishing the objectives of the PRP. At the end of each fiscal year any remaining funds would be forwarded into the next fiscal year's budget.

The committee reaffirmed its previous policy to provide assistance to any physician whether or not he/she is a MSMA member and who lives and practices medicine in Missouri.

To provide a better understanding of how this committee related to the overall structure of MSMA and to avoid unnecessary confusion, the committee expressed a need to develop a Policy and Procedure Manual.

Committee members were encouraged to forward to the MSMA office names of physicians and institutions who may assist in treatment of physicians referred to the PRP. Such a resource would allow this program to be more responsive in providing the necessary treatment to Missouri physicians.

Dr. Duggan, PRP Medical Director, informed the committee of staff changes within the program and also reported that counselors have been hired in the three cities that have Monitored Treatment Programs (St. Louis, Springfield, Kansas City). These counselors have an extensive background in addictionology, setting up employee assistance programs, and treatment programs. These changes have expanded the capability of this program while remaining within the approved budget.

The Physician Rehabilitation Program has received excellent support from hospital medical staffs throughout Missouri as well as from Missouri malpractice companies.

The MSMA Annual Convention provides an excellent opportunity to sponsor an educational program on physician impairment. The committee expressed a desire to sponsor a program during the MSMA 130th Annual Convention.

The committee reviewed proposed MSMA Bylaw changes that would expand the Physician Rehabilitation Committee to include representatives of the Missouri Association of Osteopathic Physicians and Surgeons.

The committee identified several issues needing clarification that were to be discussed with the Executive Committee. Committee members expressed a desire to meet periodically with the MSMA Executive Committee to assure a close working relationship.

The committee expressed its appreciation to the MSMA President for his willingness to meet with the Physician Rehabilitation Committee on a periodic basis and also expressed appreciation to the MSMA Executive Committee and Council for the support given to the PRP.

During the December 12 MSMA Council meeting, the MSMA President reported that the Executive Committee accepted with regret the resignation of Eileen Duggan, M.D., as Medical Director of the Physician Rehabilitation Program.

Following an extensive search, the Executive Committee has hired Theodore Roberts, M.D., as the new PRP Program Director.

John J. O'Hearne, *Chairman*
John P. Carmody
James R. Criscione, Jr.
Carl Pearman
Edward C. Felker, III
C. Preston Chester

Jim Williams
Ron Hubbard
William I. Stryker
C. E. Ridenhour
Donald McIntosh
John A. Mihalevich, Jr.
Hugh C. Bartlett
Carroll Patterson
Mrs. Sandra Mitchell
Mrs. Patricia Molnar

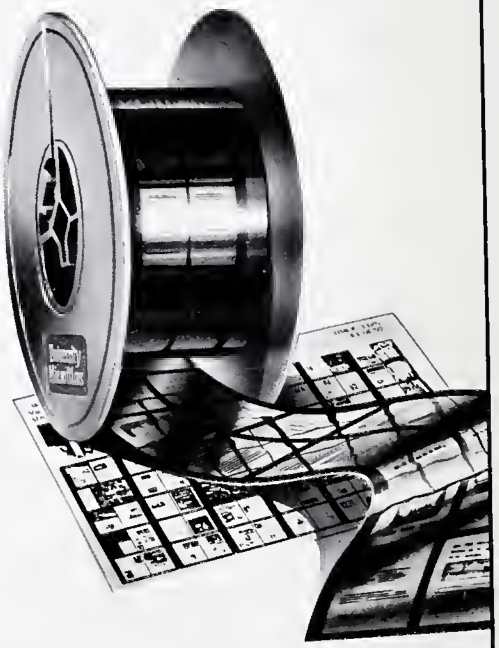
Report of Judicial Council

The Constitution and Bylaws of the Association provide that our Council "shall investigate general ethical conditions and matters." During 1987 we had a request from a member of a hospital medical staff for an ethical determination.

The hospital had offered a program to members of the medical staff that offered either "dollar/cash credits paid monthly" or "dollar credits applied against equipment on a monthly payment plan" to physicians who complete their charts for billing purposes within certain time frames. It appears that the "credits" offered applied to the use of a medical information system and for the acquisition of equipment to access that system.

In our opinion, it would be improper to pay physicians to complete medical records. It would also be improper to charge the patient for the completion of their charts. Payment in any form which would influence clinical management would also be improper. We do not feel that "dollar/cash credits paid monthly" or "dollar credits applied against equipment" would influence clinical management and therefore are not in themselves improper or unethical.

Ronald A. Youmans, *Chairman*
Hugh E. Stephenson, Jr.
E. T. Hansbrough
Richard V. Bradley
Donald McIntosh



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Gearhart, Merriam, Bethany
Gordon, Mark E., Kansas City
Harr, Patrick B., Maryville
Jacks, Richard K., St. Joseph
Kiekhaefer, T. C., St. Joseph
Mandler, George, Chillicothe
McCray, Stephen A., N. Kansas City
Moranville, B. A., St. Joseph
Mullican, Charles N., St. Joseph
Murphy, James A., St. Joseph
Nguyen, Helen, St. Joseph
Redmon, Wm., St. Joseph
Roberts, Phyllis, St. Joseph
Siegel, Charles, Gladstone
Silliman, York E., St. Joseph
Sklenar, D. E., St. Joseph
Smith, Robert, Brookfield
Sportsman, Weldon, Kansas City
Stallard, Donald J., St. Joseph
Triplett, Daniel A., Liberty
Vilmer, Stephen E., Kansas City
Wolanski, Gene, St. Joseph
Yoon, Jin Soo, Chillicothe
Young, Patricia A., Gladstone

Second Councilor District — 13

Ahad, K. A., Moberly
Bukstein, M. J., Hannibal
Cohrs, C. C., Moberly
Cummings, Daniel C., Memphis
Fleming, J. Will, Moberly
Florendo, Fred Jr., Hannibal
Florendo, Purificacion, Hannibal
Jayanandaiah, H. P., Hannibal
Kruse, Carl, Palmyra
Middleton, John W., Louisiana
Plowman, Edward, Hannibal
Stuart, Dan, Brunswick
Tompson, Robert V., Moberly

Third Councilor District — 123

Anglo, Luis B., St. Louis
Auer, Arthur I., St. Louis
Ayata, Sedat M., St. Louis
Azzam, Farid J., Chesterfield
Backer, Matt H., St. Louis
Balster, Vernon H., St. Louis
Bamshad, Jerry, Florissant
Banton, M. Roman, St. Louis
Banton, William C. II, St. Louis
Bashiti, Mohammad, St. Louis
Baue, Arthur E., St. Louis
Beare, Lucia V., St. Louis
Blair, John D., St. Louis
Blair, Olga M., St. Louis
Bohigian, George M., St. Louis
Bolton, Robert L., St. Louis
Bruns, Kenneth, St. Louis
Buettner, John B., St. Louis
Caronongan, Carmelito, Cairo, IL
Case, Mary E., St. Louis
Catanzaro, Frank J., Jr., St. Louis
Catanzaro, Rudolph E., St. Louis
Chehval, M. J., St. Louis
Coates, James G., St. Louis
Cole, Harry O., Chesterfield
Connelly, Michael, Ladue
Dames, Richard J., St. Louis
Dankner, Rand E., Chesterfield
Deeths, Tony, St. Louis
DeSilva, Ananda, Florissant
DeUngria, Pablo, St. Louis
DeVineni, V. R., St. Louis
Dickler, Donald J., St. Louis
Dilworth, Jacquelyn, St. Louis
Edwards, James E., St. Louis
Friedman, Paul L., St. Louis
Gagliardo, Joseph, St. Louis
Galakatos, Andrew E., Chesterfield
Garriga, Francisco, Florissant
Garvin, Paul, St. Louis
Gimpelson, Richard J., Chesterfield
Gladney, John H., St. Louis
Grubb, Robert L., St. Louis
Headrick, John A., St. Louis
Holtz, Alan, St. Louis
Holtz, Sumner, St. Louis
Huffaker, Wm., St. Louis
Hummel, Wm. C., St. Louis
Hurley, Joseph, Creve Coeur
Hurt, Mark A., St. Louis
Johans, Thomas, St. Louis
Johnson, Charles J., St. Louis
Kayes, Jack, St. Louis
Kitchen, Alice D., St. Louis
Knight, James, Chesterfield
Kolker, Allan E., St. Louis
Kowert, E. H., St. Louis
Kyaw, Myo M., St. Louis
L'Ecuyer, Jerome, St. Louis
Liao, Kun T., St. Louis
Lieb, Francis X., St. Louis
Lischwe, Dan, Bridgeton
Lottes, J. Otto, St. Louis
Machek, Otakar, St. Louis
Manion, Maria E., St. Louis
McBride, Lawrence, St. Louis
Melson, G. Leland, St. Louis
Meyer, Jay, St. Louis
Meyer, Melvin E., St. Louis
Middleton, Jerry N., Chesterfield
Miles, Paul W., Chesterfield
Miller, Robert N., St. Louis
Montes, Arturo, Florissant
Oakley, Margaret M., St. Louis
O'Neal, Lawrence W., St. Louis
Paletta, Frank, St. Louis
Payne, Meredith J., St. Louis
Perkins, David E., St. Louis
Peterson, Frederick, St. Louis
Petruska, Paul J., St. Louis
Portnoff, Lee, St. Louis
Purcell, John J., St. Louis
Redington, James C., St. Louis
Reynolds, Susan K., St. Louis
Ritter, Hubert A., St. Louis
Robbins, Phillip L., St. Louis
Rosenbaum, Herb, Creve Coeur
Ryall, Jo-Ellyn, St. Louis
Saha, Sudha, St. Louis
Sasser, William F., St. Louis
Schoentag, John S., St. Louis
Schwartz, Melvin M., St. Louis
Schweiss, John, St. Louis
Shatz, Burton, St. Louis
Shatz, Gerald S., Chesterfield
Shehadi, Sameer I., St. Louis
Shields, John P., St. Louis
Simon, David L., St. Louis
Smith, Kenneth R., St. Louis
Smith, Peter G., St. Louis
Spalding, Donald G., St. Louis
Steele, Jack, St. Louis
Stein, Harry, St. Louis
Steinberg, Franz V., St. Louis
Steinhubl, Steve, St. Louis
Stephen, C. R., Chesterfield
Stohr, Paul, St. Louis
Tucker, George L., Chesterfield
Tucker, Delores R., Chesterfield
Turner, Tim, St. Louis
Verde, Julian N., St. Louis
Vollmar, Lewis, St. Louis
Wacker, Leo L., St. Louis
Walker, Harvey Jr., St. Louis
Walz, Bruce J., St. Louis
Webber, William B., St. Louis
Wee, George C., Ballwin
West, Joseph W., St. Louis
Wexler, Stephen A., Clayton
Whitener, Miles C., St. Louis
Whittico, James M., St. Louis
Wilkinson, David, St. Louis
Williams, Carol, St. Louis

Fourth Councilor District — 11

Clever, Victor, St. Charles
Conoyer, J. Michael, St. Peters
Cusworth, Robert, St. Charles
Damron, Edward, Elsberry
Del Pizzo, Ferdinand, St. Charles
Farrell, Sam, Washington
Marrs, Brad, St. Charles
O'Connor, John, Warrenton
Penkoske, Michaele, St. Charles
Rother, Paul, St. Charles
Workman, George, Hermann

Fifth Councilor District — 70

Ailor, Ed, Columbia
Ailor, Susan K., Columbia
Alabasha, Imad, Columbia
Allen, Wm. C., Columbia
Anderson, Daphne, Columbia
Anderson, Philip C., Columbia
Anderson, Thomas R., Columbia
Barbee, Charles, Columbia
Black, Samuel P. W., Columbia
Blakeley, Dean, Columbia
Bradshaw, William D., Columbia
Braun, Alan L., Jefferson City
Brukardt, Diane, Columbia
Bunge, Nancy, Mexico
Burks, Michael, Columbia
Burns, Robert, Columbia
Cohen, Harry, Columbia
Cooper, Charles W., Jefferson City
Corrado, Joe, Mexico
Crowley, William J., Jr., Columbia
Despain, John, Columbia
Devkota, Jagadishwar, Columbia
Eggers, G. W. N., Jr., Columbia
Ekern, H. Peter, Mexico
Estrem, Scott, Columbia
Favassa, A., Columbia
Fotopoulos, C. K., Osage Beach
Fuchs, George J., Columbia
Fulks, Richard, California
Gallagher, L. M., California
Giangiacomo, Joseph, Columbia
Gifford, David L., Mexico
Griffin, William T., Columbia
Gunn, Victoria, Jefferson City
Guyer, Emily, Columbia
Harmon, Robert, Jefferson City
Hayden, Melvin R., Camdenton
Heimburger, Richard, Columbia
Hoxworth, Gerald M., Mexico
Huq, M. D. Nasrul, Mexico
Ide, Carl H., Columbia
Jackson, Vernon, Fulton
Kauffman, Ruth, Versailles
Klachko, David M., Columbia
Knudson, Dennis R., Columbia
Kraybill, Wm., Columbia
Lange, Mary P., Columbia
Lee, Sooja, Columbia

Lueckenhoff, Rebecca,
Jefferson City
Matthews, John, Jefferson City
Murrell, Jerry, Columbia
Muscato, Joseph J., Columbia
Nierling, Dean A., Columbia
Oro, John, Columbia
Perez-Mesa, Carlos, Columbia
Renner, Greg, Columbia
Robbins, Thomas D.,
Jefferson City
Rodgers, Dorothy, Columbia
Roller, James A., Columbia
Shah, Jay, Columbia
Shah, Saroj, Columbia
Southwick, Chris, Columbia
Stephenson, Hugh, Columbia
Stuart, Byron, Boonville
Taylor, Steve, Mexico
Thomas, Robert M., Columbia
Wankum, Robert, Jefferson City
Weaver, Dana, Columbia
Weiss, James M., Columbia
Werth, Joe, Jefferson City
Westhoff, Doug, Jefferson City
Willcox, Roger, Columbia
Wilson, George P., Columbia

Sixth Councilor District — 19

Blalock, Robert W., Marshall
Boydston, W. Wayne, Odessa
Campbell, A. J., Sedalia
Edwards, D. R., Sedalia
Haynie, Wm. W., Butler
Hornbostel, Phillip, Sedalia
Jones, Edward S.,
Overland Park, KS
King, Richard, Clinton
Lee, Gerald B., Kansas City
Lovinger, Warren C., Nevada
Lowe, A. L., Sedalia
Magee, Robert L.,
Eldorado Springs
Meyer, Jerry, Concordia
Raynor, Richard, Marshall
Riley, Charles T., Richmond
Roehrs, Marvin, Marshall
Turner, William A., Nevada
Wetzel, G. S., Clinton
Wheeler, Robert, Harrisonville

Seventh Councilor District — 149

Adelman, Bruce, Kansas City
Agee, L. Glen,
Overland Park, KS
Arbab, Ali, Kansas City
Ashby, Jennifer, Kansas City
Ashcraft, Keith W., Kansas City
Bacon, Dana, Kansas City
Barelli, Pat, Kansas City
Beck, Calvin E., Kansas City
Beller, Tom, Kansas City
Bever, Grant A., Lee's Summit
Bickley, James, Kansas City
Boone, Daniel C., Kansas City
Boyer, Philip, Kansas City
Breckenridge, Robert Jr.,
N. Kansas City
Brook, Charles, Kansas City
Brown, Elwyn, Kansas City
Bryan, William, Kansas City
Budke, Harold A., Kansas City
Burk, E. K., Kansas City
Caffrey, Raymond,
Independence
Caldwell, John K., Kansas City
Caruso, Alfred A., Kansas City
Caruso, Peter, Kansas City
Case, William F., Kansas City
Coleman, Kevin, Kansas City
Colglazier, Mary C.,
Kansas City
Curts, Calvin J., Kansas City
DeFeo, Frederick G.,
Kansas City
Desai, Uday, Kansas City
Dorzab, William, Kansas City
Durnell, M. D., Kansas City
Elkins, Robert L., Kansas City
Ellis, Jean H., Independence
Engelmann, C. E., Kansas City
Everett, James, Kansas City
Fakhoury, Donald A.,
Kansas City
Fee, Chester, Kansas City
Fogel, Steven T., Kansas City
Franklin, Curtis, Kansas City
Freilich, Brad, Kansas City
Gaitonde, M. R., Lee's Summit
Gibbons, Robert Jr.,
Prairie Village, KS
Goldsich, Edward, Kansas City
Gordon, Stephen M.,
Kansas City
Griffith, Patrick, Kansas City
Guastello, Mario J., Kansas City
Gunnoe, Robert, Kansas City
Hagan, John, North Kansas City
Hahn, Frederick, Kansas City
Haight, J. Max, Kansas City
Hall, John C., Kansas City
Hardy, John W., Kansas City
Harris, David J., Kansas City
Hausheer, Herman J.,
Independence
Hedges, Richard C.,
N. Kansas City
Herdoiza, Alfonso,
Overland Park, KS
Higgins, R. A., Kansas City
Hoech, George P., Jr.,
Kansas City
Hollinger, L. A., Kansas City
Holman, Joseph, Kansas City
Hopkins, James P., Kansas City
Huse, William J., Kansas City
Hustead, Russell, Kansas City
Johnson, Dallas A., Kansas City
Johnson, Gareth, Kansas City
Jones, Gale O., Kansas City
Katf, Nicola, Kansas City
Kayanan, J. C., Kansas City
Kelling, Douglas,
Overland Park, KS
Kelly, Joseph,
North Kansas City
Kyger, John E., Independence
Layle, John, Kansas City
Lee, King Y., Kansas City
Leifer, Gary, Kansas City
Levey, Harry B., Kansas City
Lewis, Revis, Kansas City
Lichtor, Joseph, Kansas City
Lockwood, Ted E., Kansas City
Long, R. Stacy, Kansas City
Loren, Michael, Independence
Luetje, Charles, Kansas City
Mallow, James E.,
Shawnee Mission, KS
Martin, Mark, Lee's Summit
Martin, Victoria,
Shawnee Mission, KS
Matovich, Violet B., Kansas City
Melia, B. J., Kansas City
Mertz, Janet S., Kansas City
Michelson, Richard B.,
Kansas City
Mitchell, John D., Kansas City
Mitchell, Katy, Kansas City
Montello, S. A., Kansas City
Morantz, Robert, Kansas City
Morgan, David, Kansas City
Muelleman, Peter J.,
Independence
Myers, Carl M., Platte City
Navato, Michael, Lee's Summit
O'Hearne, John, Kansas City
Oleson, Gale B., Lee's Summit
O'Malley, James F.,
Leawood, KS
Ost, Mark, Kansas City
Overman, John C., Kansas City
Parelman, Allen G., Kansas City
Parker, Joseph C., Kansas City
Perico, C. V., Blue Springs
Piebenga, Larry, Kansas City
Piepergerdes, Larry, Kansas
City
Pinkerton, Joseph, Kansas City
Potts, Donald A., Independence
Prather, Charlene, Kansas City
Price, Patrick, Blue Springs
Racela, Antonio, Kansas City
Reddy, Sarvotham K.,
Kansas City
Reiss, Jeanne E., Kansas City
Reister, Dorothy, Shawnee
Mission, KS
Rhodes, Andrew J.,
Independence
Rigdon, John, Lenexa, KS
Roberts, Charles C.,
Kansas City
Roberts, Fred, Kansas City
Rosen, Larry A., Kansas City
Roth, Alfred D., Mission, KS
Rues, Lawrence A., Kansas City
Rymer, Marilyn, Kansas City
Sabates, Felix N., Kansas City
Saferstein, A. Lester,
Shawnee Mission, KS
Sanders, Donald, Kansas City
Sauer, Gordon, Kansas City
Schertz, Truman,
N. Kansas City
Schottman, G. W., Kansas City
Schwartz, Howard I.,
Kansas City
Siegel, Carl D., Kansas City
Sirridge, Marjorie S.,
Kansas City
Skillman, Robert K.,
Kansas City
Spalding, Wilber B.,
Kansas City
Stacey, Wallace, Independence
Stass-Isern, Merrill, Kansas City
Stribling, Thomas L.,
Independence
Thomas, F. Anthony,
Kansas City
Tuohy, G. F., Kansas City
Uketui, Immanuel, Kansas City
Wall, Harry C., Kansas City
Weaver, Mike, Kansas City
White, James, Kansas City
Whittaker, C. Keith,
Kansas City
Wilkinson, Charles B.,
Kansas City
Williams, Joseph C.,
Kansas City
Wurster, W. Joel, Kansas City
Yedlin, Jay H., Kansas City
Youll, Donald V., Kansas City
Youmans, Ronald A.,
Kansas City

Eighth Councilor District — 68

Al-Shathir, S. M., Joplin
Ameduri, Clifford J., Springfield
Anderson, Paul B., Neosho
Ash, Charles, Springfield
Bagby, Jack, Springfield
Blankenship, G. W., Neosho
Brian, W. J., Springfield
Brigden, Robert, Joplin
Campbell, Daniel, Mt. Vernon
Cain, Alvin R., Lamar
Cotner, Mark, Joplin
Curry, Stephan R., Springfield
Daily, James, Springfield
Dandridge, W. C., Jr., Joplin
Domann, Darrel, Springfield
Duff, James, Springfield
Enkvetchakul, B., Springfield
Esparrago, F. R., Monett
Ferguson, John P., Springfield
Graham, Joseph M., Joplin
Grim, Ed, Joplin
Hall, David, Rogersville
Hardman, William A.,
Springfield
Hellam, Duane, Springfield
Hilton, Paul E., Joplin
Hoeman, Michael D.,
Springfield
Hubbard, Sally, Springfield
Huewe, Douglas, Springfield
Isaac, Anita M., Mt. Vernon
Ivy, H. B., Springfield
Key, James S., Springfield
Kissell, Richard, Springfield
Knowlton, Norman, Springfield
Loesch, J. John, Joplin
Lorenc, Ernest, Springfield
Lurie, Harold, Springfield
Macdonnell, T. M., Marshfield
Magaw, David, Everton
McCorcle, Marc, Springfield
McMillan, David L., Neosho
Milne, Jay L., Springfield
Mohsen, Aly, Springfield
Morrow, Gene, Springfield
Nickell, Michael, Joplin
Nix, J. Gustavo, Bolivar
Peterson, Stanley, Springfield
Piker, Dewayne, Springfield
Quinn, Paul S., Springfield
Quinn, Rodney D., Springfield
Raborar, Arteso, Springfield
Rankin, Wendell D., Joplin

Roberts, Howard, Joplin
Rogers, James T., Springfield
Shaeffer, James, Springfield
Shah, Ramesh, Joplin
Sherrod, Duane W., Joplin
Spalding, D. L., Springfield
Sullivan, Dan, Springfield
Sweeney, Thomas P., Springfield
Vale, Janie R., Springfield
Wall, Norman, Springfield
White, R. Ned, Springfield
Willcoxon, Robert, Joplin
Wilson, Roy E., Springfield
Winsky, Arlen D., Springfield
Wooldridge, Wilfred E., Springfield
Wolfe, James, Springfield
Zahn, Robert, Springfield

Ninth Councilor District — 11

Antebi, Morris E., West Plains
Barbe, David, Mountain Grove
Bartlett, Hugh, Rolla
Bass, Barry J., Rolla
Bass, Jim, Rolla
Breeden, Richard, Rolla
Hasek, James A., Mountain Grove
Huster, Robert, Rolla
Jenkins, Ed, Waynesville
Mayuga, L. G., Cabool
Stubbs, Thomas, West Plains

Tenth Councilor District — 22

Albano, Benjamin I., Crystal City
Auner, David, Pilot Knob
Bowers, Gregory, Sikeston
Chapman, Jean A., Cape Girardeau
Chastain, Charles, Flat River
Comeau, R. J., Dexter
Dettmer, Robert F., Ironton
Eller, Gordon W., Cape Girardeau
Frazier, Robert L., Sikeston
Gieselmann, James, Poplar Bluff
Jones, Stanley G., Sikeston
Jung, J. Marshall, Cape Girardeau
Mahboubi, Aziz, Sikeston
Masters, Edward J., Sikeston
Ramsey, Jesse R., Cape Girardeau
Reed, Martha, Hillsboro
Robinson, Nicholas, Kennett
Seabaugh, Wm. O., Cape Girardeau
Shell, Wm., Sikeston
Sparkman, Thomas C., Cape Girardeau
Turner, Kirby, Poplar Bluff
Verzola, E. G., Herculaneum

St. Louis University Student Medical Society — 4

Godwin, Lee, St. Louis
Gonser, William, St. Louis
Matteri, Carol, St. Louis
Meyer, Gretchen, St. Louis

University of Missouri-Columbia Student Medical Society — 3

Blakeley, Dean, Columbia
Meyer, Joseph, Columbia
Mills, Loria, Columbia

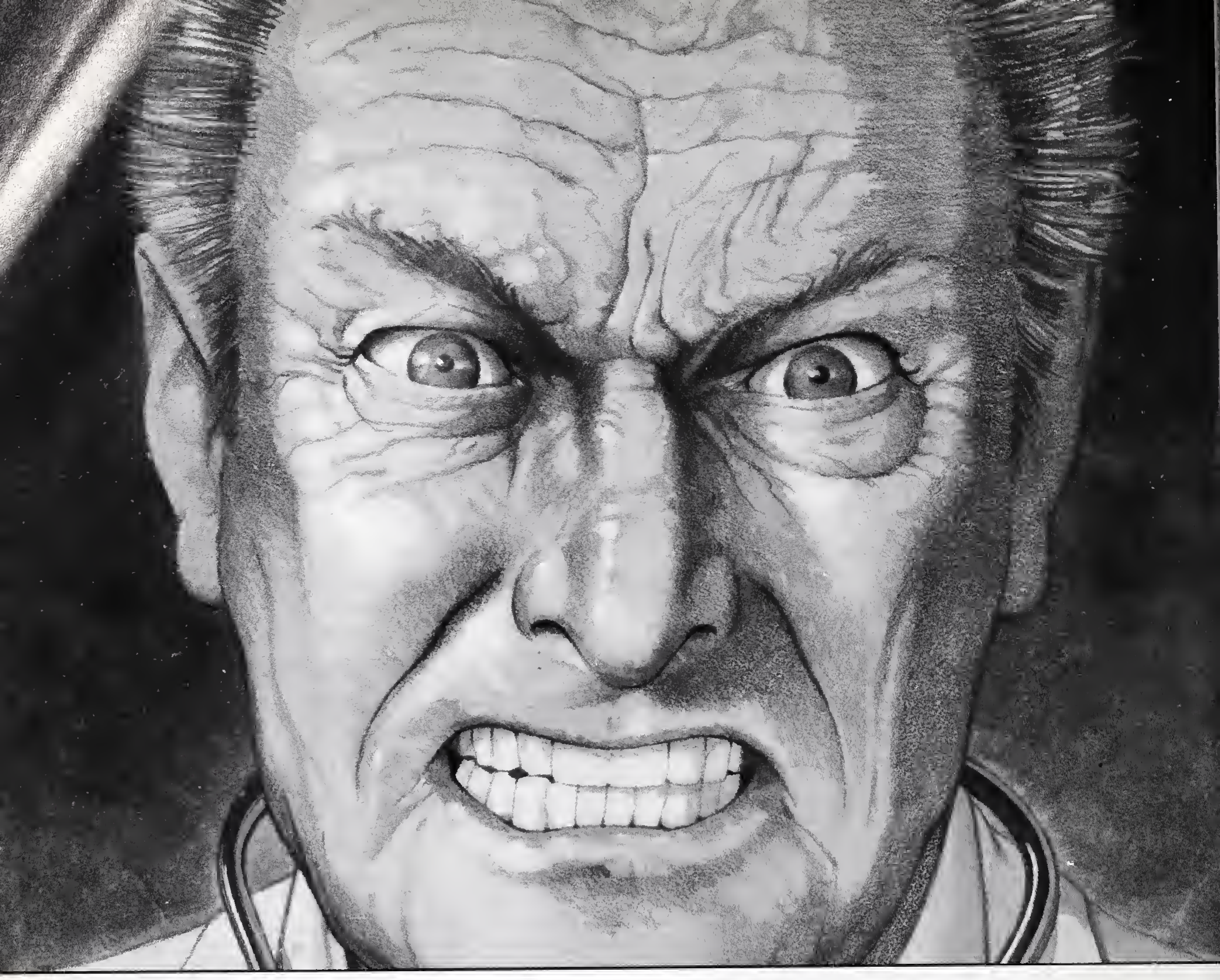
University of Missouri-Kansas City Student Medical Society — 2

Siegfried, Carla, Kansas City
Syed, Nasreen, Kansas City

Guest Physicians — 111

Amelr, Richard, Ottumwa, Iowa
Bashiti, Hind, Chesterfield
Batnitzky, Solomon, Kansas City
Bigler, David, Lincoln, Nebraska
Bigler, F. Calvin, Garden City, KS
Blinder, Kevin, Columbia
Blythe, James G., St. Louis
Bontke, Catherine, Houston, TX
Boulware, Robert, Kansas City, KS
Bray, William H., Columbia
Brillhart, Maxine T., Kansas City, KS
Buchanan, Brad, Springfield
Burton, M. D., Florissant
Cerza, Robert, St. Joseph
Clar, Michael, St. Louis
Clemens, Peter C., Lee's Summit
Cline, Byron W., Wichita, KS
Colantoni, William Jr., Davenport, IA
Collins, Jane, Bettendorf, IA
Collins, Jeff, Kansas City
Cornelius, Lynn, St. Louis
de Schweinitz, Louise, Kansas City, KS
Duvall, Joe, St. Louis
Fabielshi, Gerald, Kansas City
Fay, Marshall, St. Louis
Fibuch, Eugene, Leawood, KS
Fink, Diane, New York, NY
Flotley, John A., Kansas City
Friedan, Floyd J., Kansas City
Friedrich, Ernest R., St. Louis
Gardner, Gale, Memphis, TN
Gearhart, David L., St. Louis
Gerrond, Linda, Roeland Park, KS
Giessel, Mike, Topeka, KS
Gilles, Mary Ellen, Prairie Village, KS
Gleason, J. A., Topeka, KS
Goodwin, Donald W., Kansas City, KS
Graham, Charles, Kansas City, KS
Green, Robert, Ann Arbor, MI
Grimes, Elwyn, Chicago
Haber, Melvin, St. Louis
Harrin, William R., Kansas City
Harris, Hubert L., Topeka, KS
Hart, Thomas, Columbia
Hoskins, Bruce, Kansas City
Hunt, Howard H., Kirksville
Ide, Johanna, Columbia
Imhof, Kevin, Kirksville
Isaacs, John, Chicago, IL
Isern, H., Kansas City, KS
Kennedy, Jim, Kansas City
Koepke, Jerald, Denver, CO
Kohrman, Michael, Springfield
Kopperman, Mordecai, Kansas City
Lai, Jacqueline, Kansas City, KS
Lange, Michael, Columbia
Le, Hieu Hue, Chesterfield
Le, Hoa, Chesterfield
Levenson, Ina, South Milwaukee, WI
Levisohn, Dianne, St. Louis
Lischwe, Marlene, Bridgeton
Lonergan, James, Kansas City
Love, Gerry, Kansas City
Macfarlane, Doug, Olathe, KS
Mackenzie, Douglas, Columbia
Magrina, Javier, Scottsdale, AZ
Marr, Garrett, Prairie Village, KS
Maslan, Mark, Kansas City
Masterson, Byron, Gainsville, FL
McGooey, Joseph W., Detroit, MI
McIntire, Larry, Kirksville
McKnight, Scott J., North Kansas City
McNitt, Jay, Fairway, KS
Miller, Dianne J., St. Louis
Murphy, Terence, Seattle, WA
Neldner, Kenneth H., Lubbock, TX
Nelson, Alan R., Salt Lake City, UT
Patterson, Russell, New York, NY
Passman, Steven, Wichita, KS
Patterson, Russell
Pearce, E. W. J., Shawnee Mission, KS
Portnoy, Jay, Overland Park, KS
Racela, Luz S., Kansas City
Rada, David C., Kansas City
Robinson, Jay, Kansas City
Rodenberg, Howard, Kansas City
Roehrs, Maria, Columbia
Ross, Brian, Seattle, WA
Rupani, Mahendra, Kansas City
Sackman, Vernon, Shaker Heights, OH
Santa Cruz, Daniel, Creve Coeur
Segal, N., Quincy, IL
Seggev, Joram, Columbia
Shen, Winston, St. Louis
Smith, J. N., Columbia
Smith, Patricia Mooney, Kansas City
Spencer, Millard C., Topeka, KS
Stoops, Stephen, Shawnee Mission, KS
Thedinger, Bradley S., Kansas City
Todd, Michael, St. Louis
Tracy, T. A., Wichita, KS
Walsh, Rich, Bloomfield, IA
Waxman, Nancy R., Grandview
Weinstein, George, Morgantown, WV
Welch, Maura, Garden City, KS
Werner, Caroline, Kansas City
West, David, Columbia
Westbrook, C., KS
Wetzel, Louis, Kansas City
Winblad, H. Kent, Winfield, KS
Young, Dan, Clayton

There were 535 members, 111 guest physicians, 126 guests, 91 MSMA Auxiliary members, 231 exhibitors and 22 staff members present. Total registration was 1116.



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Summary of Council Minutes
1987-1988

Meeting of April 5, 1987
Tan-Tar-A, Lake of the Ozarks

Dr. Marvin Singleton was elected chairman of the Council and thereby became the presiding officer. Dr. Gary A. Dyer was elected vice-chairman.

Drs. Berry Ivy and Jay Meyer were re-elected to their offices of MSMA secretary and MSMA treasurer.

Meeting of May 30, 1987
Inn at the Grand Glaize, Osage Beach

The Council approved the purchase of the California Medical Association handbook on physician contracting, to be made available to MSMA members for $5.00 each.

Renovation of MSMA headquarters was again discussed, with a new Building Committee appointed.

Approval was also given to investigating the AMA Medical Payment System, with the possibility of adding the system as a member benefit.

There was discussion of the use of credit cards for the payment of dues. The Council accepted a recommendation that Boone County Medical Society, in cooperation with the AMA, enter into a trial of credit-card dues payment for 1988 dues. Installment payment of dues, a matter often discussed in the past, was tabled as an issue, pending results of several pilot projects conducted by the AMA. The Council also gave its approval to a planned phonathon aimed at members who have not renewed their memberships, in an attempt to pursuade them to change their minds.

The Missouri State Medical Foundation report was heard. Highlights of the report included discussion of a new loan contract, use of the computer to figure interest, the E. F. Hutton charitable remainder trust plan to benefit the Foundation, and the election of Board members.

Sixth District Councilor Dr. A. J. Campbell expressed the concerns of physicians in his district that acceptance of Medicare assignment could be made a condition of relicensure. The Committee on Legislative Affairs was charged with studying the issue further.

There was discussion from the Eighth Councilor District regarding the recently concluded study of an MSMA-sponsored IPA/HMO and its feasibility. Dr. Piepergerdes was to communicate with the physicians to clarify any misconceptions.

District 9 Councilor Dr. David Barbe reported that he was working with the presently inactive component medical societies in his district in order to get them back on their feet.

Hospital Medical Staff Section Councilor Dr. Charles Barbee told the group that the section had formed and elected officers. Next items on the HMSS agenda would be model staff bylaws and PRO review and sanctions.

Resident Physician Section Councilor Dr. Gerry Love indicated that his section would be meeting through the summer to organize.

Several reports were heard and approved by the Council, including reports from the Legislative Affairs Committee, the conjoint meeting of the executive committees of MAOPS, MHA and MSMA, the Auxiliary, the Physician Involvement Program, Missouri's PRO, and MMPAC.

The Strategic Planning Committee reported it had been working to develop a questionnaire to be sent to a random sample of MSMA members. A consulting firm from Chicago, the Health Policy Research Group, was coordinating the survey.

Actions taken on resolutions from the 129th Annual Convention were reviewed for the Council.

Dr. T. J. Cooper brought before the Council the proposed HIV antibody testing and reporting guidelines from the Missouri Department of Health. Expressing concern that screening test results, under the proposed rules, would become reportable, he suggested that the MSMA draft a response recommending that only confirmed positive tests be reportable. The Council agreed.

The report of the Missouri Medicine Publication Committee was presented. Among the topics discussed by the Committee were new guidelines for authors, better communication with members of the Editorial Board, qualifications of Board members, restructuring of advertising responsibilities, and plan to place more feature stories in the journal.

Meeting of September 12, 1987
Holiday Inn, Lake of the Ozarks

Several workshops were given approval for MSMA sponsorship.

It was announced that the names of Dr. Darrel Domann, Dr. Thomas Sparkman, and Dr. David Wilkinson would be proposed for gubernatorial appointment to the State Board of Registration for the Healing Arts. In addition, Dr. James Whittico was nominated for the AMA's Dr. Benjamin Rush Award, and Dr. Melvin Kasten's name is before the AMA Board of Trustees for a position on the AMPAC board.

The Association, it was reported, is sponsoring a Key Contact Training Seminary on January 16 in Jefferson City.

A membership report indicated membership was down from 1986, and Councilors were urged to contact members who had not renewed their memberships. A non-member mailing in August netted 15 new applications.

The Council gave its approval to several CME reaccreditations.

A report from the Missouri State Medical Foundation indicated that 92 medical students had received a total of $162,500 in loans. Loan debt was named as a major area of concern.

Two resolutions from the Third Councilor District were referred to the Legislative Affairs Committee. They concerned licensure of day-care facilities and immunization requirements for children.

A third resolution from the 10th Councilor District was referred to the Legislative Affairs Committee for study and to the Executive Committee for swift action, if required. This resolution concerned the medical qualifications of the Director of the Division of Comprehensive Psychiatric Services.

Dr. Larry Piepergerdes, president, announced Dr. Ronald Youmans and Dr. William Shell would be nominated for seats on the PRO board.

report from the PRO emphasized their focus on education rather than sanctions. Dr. William Bradshaw, president and medical director, expressed his willingness to speak before hospital medical staff meetings in order to better inform physicians about the PRO's mission.

Dr. Bradshaw also gave a report from the Task Force on CME, which was formulating proposals for implementing the new state law requiring CME hours for relicensure.

The Council referred to The Executive Committee the production and distribution of a looseleaf manual on AIDS, based on one produced by the Medical Society of Virginia, to all members of the MSMA.

Approval was given to the nomination of Dr. Keith Rich to the *Missouri Medicine* Editorial Board. Dr. Jordan Burkey, editor, suggested to the Council that the editor's term be limited to four to six years.

A report from the Physician Rehabilitation Committee was filed. Two recommendations from the committee, dealing with MSMA bylaws changes, were referred to the Executive Committee for study and follow-up report.

The Council approved the endorsement of Dr. Hugh Stephenson and Dr. Richard Bradley for AMA Council seats, subject to Board of Trustees nomination.

AMA delegate Dr. Walter German suggested a new system for reimbursing delegates attending the AMA meetings, to total compensation. The matter was referred to the Budget and Finance Committee.

The Judicial Council reported back on the matter of physician compensation based on chart completion. The Council accepted the report.

The Legislative Affairs Committee gave its report on potential legislative issues for the coming year, as well as a follow-up on resolutions referred to it from the 129th convention.

The Council accepted a report from the Commission on Public Affairs, including its recommendation that materials and services produced by the MSMA be offered to non-members at a higher price than to members.

A report was presented from the Health Policy Research Group, which was conducting a survey of the membership and generating a report to be used in long-range planning for the Association. Goals, possible programs, and an implementation plan were to be discussed by the committee.

Meeting of December 12, 1987
Capitol Plaza Hotel, Jefferson City

It was reported that the Association has raised objections to a proposed relicensure questionnaire for Missouri physicians. The Board of Healing Arts accepted the MSMA suggestions and revised the questionnaire for 1988.

On the subject of dues payment, it was noted that one member has chosen to pay AMA dues in installments, and there were no takers on the Boone County Medical Society's credit card payment option.

MSMA members Dr. Darrel Domann and Dr. David Wilkinson were announced as the most recent appointees to the Board of Healing Arts.

Dr. Piepergerdes reported he had received a letter of resignation from *Missouri Medicine* editor Dr. Jordan Burkey, effective with the April 1988 issue.

The Council received a report from the Strategic Planning Committee. The report, which was adopted, included a set of recommendations and goals for the Association, as well as suggestions for the implementing the plan. The Executive Committee will oversee the implementation and take charge of reporting to the House of Delegates and to the membership at large as the plan takes shape.

The Executive Committee reported it had accepted with regret the resignation of Dr. Eileen Duggan as medical director of the Physician Rehabilitation Program.

The Budget and Finance Committee presented its report, including the proposed budget for 1988. The report was accepted.

The Executive Committee then presented its recommendations regarding several proposals from the Physician Rehabilitation Committee. The Committee recommended making a Bylaws change that would eliminate the requirement that members of the PRC be members of the MSMA. It also proposed that the specific makeup of the PRC be outlined in the PRC Policy and Procedure Manual, which would also contain any desired language regarding confidentiality of records. Finally, the Executive Committee recommended rephrasing of an original PRC recommendation that would alter the makeup of the PRC Board of Directors. These recommendations were adopted.

A resolution from the Metropolitan Medical Society of Greater Kansas City, addressing the formation of a peer review service by the MSMA, was referred to the Executive Committee.

The Council voted to file a report from the Physician Rehabilitation Committee. The sole recommendation dealt with the Board of Healing Arts' proposed license renewal questionnaire.

Dr. Larry Piepergerdes expressed his hope that the PRC and PRP could continue to operate as it had, but recommended some changes be made in administration. He proposed that Dr. Duggan be retained as medical director through January, that a word processor be rented for the program, that an additional counselor be hired for St. Louis, and that the adminstrative assistant be placed on full-time status through January. The Council amended the recommendations by asking that Dr. Duggan be made "director of transition," with transition duties clearly delineated. The amended recommendations were adopted.

Dr. William Bradshaw reported the MSMA had received reaccreditation for four years. Reporting from the PRO, Dr. Bradshaw stated the organization was in a financial bind. He asked MSMA support in finding physicians who would perform chart reviews for reduced or no reimbursement.

Dr. James Redington, HMSS Chairman, presented the Hospital Medical Staff Model Bylaws. The Council adopted the bylaws and directed they be copyrighted before release at the January 30-31 HMSS meeting.

Reports were given from the Legislative Committee, the MMPAC, the AMA delegation, and the Board of Healing Arts. The Board has approved a rule requiring 25 hours per year, or 75 per three years, of CME for physician relicensure.

The Council heard a report from the Public Affairs Commission. The four recommendations made by the Commission were referred to the Executive Committee. These dealt with the establishment of an in-house "expert" on practice management issues, third parties, and other issues; a program for special recognition to deserving physicians on a periodic basis, having an exofficio Auxiliary member on the Commission; and publishing an informational article in the journal on closing a medical practice.

Meeting of January 30, 1988
Holiday Inn Executive Center, Columbia

The Council adopted the four recommendations of the Public Affairs Commission, and approved a schedule of new workshops for 1988.

A research project into Medicaid physician reimbursement was given approval, with a $21,000 fiscal note attached.

The appointments of Don Sessions, M.D., and Ramona Chapman, M.D., were approved as editor and associate editor of the journal. The report of the Sunsetting Committee was adopted with one recommendation referred to the Executve Committee.

The Council approved a plan by Dr. Cooper to begin a program of identification for Medicare patients whose income level justifies a deferment of balance billing.

A report from the Legislative Affairs Committee reviewed bills that have implications for medicine and medical practice.

Meeting of March 16, 1988
Hyatt Regency, Kansas City

At the request of Dr. Gary Dyer, member of the Commission on Continuing Education, the Council approved CME re-accreditation for the following:

Charles E. Still Osteopathic Hospital — Jefferson City — 2 years
Civic Health Foundation of Greater Kansas City — 1 year
Alexian Brothers Hospital — St. Louis — 2 years

Chairman Singleton then introduced Dr. Alan Nelson, Chairman of the Board of Trustees of the AMA, who will address the meeting.

President Piepergerdes asked the Councilors for the name of a delegate from their district to serve on the Nominating Committee. Dr. Piepergerdes reported that Drs. Jack Curtis of Columbia; John Daniels, St. Louis and Stephen Hamburger, Shawnee Mission, KS, had been added to the Publications Committee.

Mr. Royal O. Cooper, Executive Vice President, gave a brief membership report, indicating that most societies are approximately 80% dues paid to date. He also reported that the third dues billing had been mailed.

Mr. Cooper complimented Cynthia Bushman on her work so far on the Medicaid Project approved at the January meeting. Ms. Bushman will be meeting with a group of physicians on Friday morning to discuss Medicaid problems. He asked the Councilors for either their participation or attendance by members from their District. He stated that final reports on our insurance and other membership benefit programs indicate that these programs have been successful in 1987. Mr. Cooper indicated that the AMA was seeking nominations for the William Beaumont Award; Distinguished Service Award; Benjamin Rush Award; and residency review committees.

Mrs. Sandy Mitchell, President of the MSMA Auxiliary, said Auxiliary Day at the Legislature had gone well. She invited all present to the Luck of the Irish Fundraiser for AMA/ERF and MSMF on Thursday night. She then introduced Mrs. Eileen Dyer, the incoming Auxiliary President. Dr. Campbell noted that Mrs. Mitchell had recently been appointed to the AMA Auxiliary Committee on the Legislation.

Mr. Cooper gave a brief report from the Legislative Affairs Committee. He mentioned bills dealing with disposal of infectious waste and physician dispensing.

Dr. David Wilkinson, Councilor Advisor to the Commission on Medical-Legal Affairs, referred the Councilors to the published minutes in their folders. Briefly, the Commission considered several bills pending before the General Assembly, experiences to date with the tort reform law, and discussion on AIDS and HIV testing.

Dr. Ted Roberts, Program Director of the Physician Rehabilitation Program, distributed a summary of his current activities. He stated that the program is viable and asked for the council's continued support. The program now has a Counselor and MTP in Kansas City.

Mr. Cooper directed the Council to the Report of the Committee to Preserve Health Care that was in their folders. The committee is monitoring the progress of various tort reform efforts. It is also working with the Department of Health to correct language deficiencies in the legal defense fund statutes from 1987 in order that the original intent of the legislation could be carried out.

Dr. Peter Ekern presented a report from the Building Committee. The Committee has approved a plan for renovation and remodeling of 113 and 115 Madison Street. It is estimated that construction costs and furnishing will be approximately $278,694. In addition, there will be an architect's fee of approximately $30,000.

On motion by Dr. Reister, the Council tabled this matter until the Sunday Council meeting to give all Councilors the opportunity to review blueprints and renovation plans.

Dr. Fred Peterson, Chairman of the Board of the Missouri Patient Care Review Foundation, reported that the PRO had hoped to have the Medicaid contract, but it had been awarded to the Sunderbrook Corporation of Iowa. Current relations with HCFA are good, and the PRO contract has been extended another two months. This means that renewal will come up in September or October. Approximately 80% of those physician-reviewers who were asked to provide review at no reimbursement have agreed to do so. Dr. Bradshaw, however, did ask for additional volunteer reviewers to keep work loads reasonable for all reviewers.

Dr. George Bohigian, AMA Delegate, invited those present to attend the discussion with the AMA Delegates on Saturday morning.

Dr. Singleton recognized the Deans of Medical Schools who were present. He also encouraged Councilors to become Sustaining Members of PAC. ■

Missouri State Medical Foundation

March 18, 1988
Hyatt Regency Hotel, Kansas City, Missouri

Board of Trustees

The Annual Meeting of the Board of Trustees of the Missouri State Medical Foundation was called to order by Gary A. Dyer, M.D., vice president. The following slate of officers was nominated from the floor and elected by acclamation:

President — Miles C. Whitener, M.D., St. Louis
Vice President — Fred Hahn, M.D., Kansas City
Secretary/Treasurer — Robert Tanner, M.D., Jefferson City
Assistant Secretary — Susan Flanigan Gold, MSMA staff

The Foundation received more than $8,000 in donations in 1987 as well as $25,000 from the MSMA dues assessment. This is the last year for the member assessment as the Foundation has become self-perpetuating. MSMF ad promotions in *Missouri Medicine* on a space-available basis continue to prompt contributions.

Regarding old business, a suggestion to tie the MSMF loan interest rate to the prime interest rate was discussed at the 1987 meeting. Ms. Gold investigated the cost of changing the computer program. The MSMF accountants, Williams-Keepers, estimate the cost at $2,000-3,000.

Much discussion followed including adjusting the interest during the annual meeting for the coming loan year. Changing the interest annually and even quarterly was also discussed; this would be accomplished by a telephone conference among the MSMF Board members.

Currently, loan recipients are charged 4% interest during medical school and 10% during residency and the three years post-residency. The Board decided the current rates are equitable following discussion and a vote. Therefore, MSMF will continue to use the 4-10% loans for 1988-89.

There being no new business, the meeting was adjourned.

MSMF Annual Meeting

The Annual Meeting of the Missouri State Medical Foundation was called to order by Gary A. Dyer, M.D., vice president. The minutes of the 1987 Annual Meeting were approved as published in the July 1987 issue of *Missouri Medicine*.

For the 1987-88 academic year, the Foundation awarded $165,000 in loans. The Foundation also received a gift of $1000 in Schering-Plough stock. Those present voted to reinvest the dividends from the stock.

Next, Mike Grimes, the director of the Missouri State Medical Retirement System and vice-president of Shearson Lehman Hutton in Clayton, reported on his MSMF direct-mail solicitation. Information was sent to MSMA members who were potential clients for a retirement program that would facilitate contributions to MSMF. The three-segment program encompassed a charitable lead program, a supplemental retirement plan program, and a charitable remainder trust program. Mr. Grimes explained each program and the mailing. The first half of the mailing reached the targeted physicians just a few days before the October 1987 stock market crash. The second half was mailed in February 1988. The 4,500 mailing received only six responses. Those present discussed inserting MSMF contribution information into a MSMA mailing. Ms. Gold will investigate this possibility.

In addition, a recognition program was discussed. MSMA members who contribute to the Foundation would be listed in *Missouri Medicine*.

There being no old business, new business became the next item. Financial aid officers from three of Missouri's medical schools presented their thoughts on the MSMF loan program. Those present were Marilyn McGuyre from the University of Missouri-Kansas City (UMKC), Mary Walton from St. Louis University (SLU) and John Walters from Washington University (WU).

Ms. Walton reviewed her concerns with the MSMF program. Since SLU has numerous students from out-of-state, she wondered when they might qualify as Missouri residents. She also mentioned that the MSMF loan interest rate is higher than other loan sources.

Mr. Walters said WU lowered their tuition for 1988-89 and developed a 0% loan program for their medical students. He suggested that MSMF provide 0% loans with the following repayment schedule. After a three-month grace period following graduation from medical school, loan recipients will make $100.00 monthly payments for three years. If the loan is not repaid in three years then 10% simple interest will be charged. Recipients who fail to repay according to the scheduled repayment plan will be considered in default and charged 10% simple interest.

Much discussion occurred on this topic. Mr. Walters and Ms. Walton will submit a written proposal outlining their suggestions for reorganizing the MSMF loan program. Once that proposal is received the Foundation will meet via conference call and discuss it.

The meeting was then adjourned. ■

Medical School News

The University of Missouri-Columbia

■ The University of Missouri-Columbia Medical Alumni Organization honored **William C. Allen, M.D., Thomas W. Burns, M.D., J. Ned Smith, M.D.,** and **Samuel P. W. Black, M.D.,** with Honorary Alumni Awards in March during the Missouri State Medical Association's annual meeting.

The award, given to individuals who are not medical school alumni, was presented to Drs. Allen, Burns, Smith, and Black, because of the commitment each had deomonstrated to the School and the Organization.

Dr. Allen, professor emeritus of family and community medicine at the University of Missouri-Columbia School of Medicine, was born in La Belle, MO. He attended Central Methodist College, then completed his undergraduate degree and earned his M.D. at the University of Nebraska. After practicing medicine for seven years in Glasgow, MO, Dr. Allen received a master's in public health from Johns Hopkins University in 1960.

Dr. Allen received the Distinguished Service Award of the Missouri Academy of Family Physicians in 1971 and has been listed in several "Who's Who" publications. In 1984 he was honored with the Thomas W. Johnson Award given by the American Academy of Family Physicians.

Dr. Burns, professor of medicine at the University's School of Medicine, is director of the division of endocrinology, metabolism and diabetes. He also serves as director of the University's Cosmopolitan International Diabetes Center where patients from throughout the state receive the latest in treatment and medical management of diabetes and its complications.

A member of the American College of Physicians, American Society of Internal Medicine and Boone County Medical Society, Dr. Burns is a consultant to area hospitals. He has received the American College of Physicians Laureate Award, the University's Cosmopolitan Award and the Cosmopolitan International President's Award.

Dr. Smith, professor of medicine at the University of Missouri-Columbia, was born in Iowa City, IA. He received his bachelor's and M.D. from the University of Iowa and served as a resident at the University of Iowa from 1952-55. Dr. Smith has been with the University of Missouri-Columbia since 1956 and has served on many research and faculty committees.

Dr. Smith has served as advisor to the American Medical Association's Drug Evaluation Board. His professional memberships include the American Gastroenterological Association, the American Medical Association and the Boone County Medical Society.

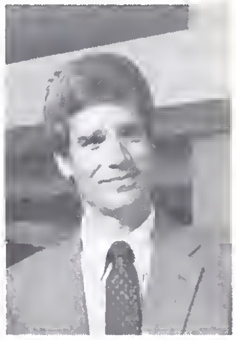
Dr. Black, professor emeritus of surgery at the University of Missouri-Columbia School of Medicine, was born in Barbourville, KY. He received his B.S. from Yale University and his M.D. from Johns Hopkins University. He completed his residency at New Haven Hospital.

Dr. Black is currently the director of the Intracranial Aneurysm Study with the department of pathology at the University of Missouri-Columbia. He serves as a consulting neurosurgeon for Boone County Hospital, Missouri Crippled Children's Service, Ellis Fischel State Cancer Hospital and the Veterans Administration Hospital of Columbia.

■ **Robert Blake, M.D.,** associate professor of family and community medicine, has just received the 1988 Weatherby Award from the Society of Teachers of Family Medicine. The $5,000 award is in recognition of Dr. Blake's outstanding research as a young investigator in family practice.

■ **Jack Colwill, M.D.,** professor and chairman of family and community medicine, has just been installed as president of the 2,800-member Society of Teachers of Family Medicine. The organization represents the chairman of family medicine departments in medical schools nationwide. Dr. Colwill's presidential address on recent trends and controversies in primary care education will be published soon in *Family Medicine.*

■ **Greg Flaker, M.D.,** associate professor of cardiology, **John Byer, M.D.,** associate professor of neurology, **Richard Webel, M.D.,** assistant professor of cardiology, and **Barbie Nolte, R.N.,** research coordinator, are leading the University's participation in a nationwide study of the effectiveness of aspirin or a common blood-thinner in preventing strokes in high-risk patients. The School of Medicine is one of 16 centers participating in the four-year NIH study of the use of aspirin and warfarin in the prevention of strokes in people with atrial fibrillation. "One in every three people with non-valvular atrial fibrillation eventually has a stroke in their lifetime and we are trying to determine how to prevent those strokes," explains Dr. Flaker.



■ **William Folk, Ph.D.,** professor of microbiology at the University of Texas at Austin, has been named chairman of the University of Missouri-Columbia department of biochemistry. Dr. Folk's plans for the department include initiating research into the cellular mechanism of the HIV virus, continuing his research of how viruses convert normal cells into cancer cells and furthering the University's already-established plant molecular biology program. Before joining the University of Texas in 1984, Dr. Folk was a faculty member at the University of Michigan Medical School in Ann Arbor for 11 years. He graduated magna cum laude with a B.A. in biochemistry from Rice University in Houston and received his Ph.D. in biochemistry from Stanford University. He plans to begin serving as the University's biochemistry chairman in January 1989.

■ **Robert G. Frank, Ph.D.,** associate professor of physical medicine and rehabilitation, recently presented "The Selective Reminding Test in relation to other measures of memory and intellectual functioning" at the Sixth Annual National Head Injury Foundation Symposium in San Diego, CA. Dr. Frank also had his article, "Adjustment to spinal cord injury: A review of empirical and nonempirical studies" published in the *Journal of Rehabilitation*.

Paul Kaplan, M.D.**, professor and chairman of physical medicine and rehabilitation, served as a guest examiner for oral boards in May in Rochester, Minnesota.

■ **David Lee, Ph.D.**, assistant professor of microbiology, received a continuation grant from the Department of Health and Human Services for his work, "Characterization of Murine H-2D Region L-Like Genes." The three-year award total is $130,260.

■ **Rosellen Meystrick, M.D.**, plastic surgery research fellow, presented her studies on the use of leeches in vascular surgery at the meeting of the Midwestern Association of Plastic Surgeons in Minneapolis in May. Her research in rabbits and dogs indicates a significantly improved survival rate of damaged tissue when leeches are used to carry blood out of the damaged area.

■ **Jeff Moran, Ph.D.**, research specialist in physiology, won first-place in the humorous-writing category at the 1987 Missouri Writers Guild meeting in Branson, MO, for his article, "Null Science," published in *MD Magazine*. In his award-winning article, Dr. Moran proposes formation of a new scientific journal, the Journal of the Null in which all titles must contain at least one negative term. His suggestions of possible articles to be discussed in such a journal include: "Sandstone is not Granite" "Stars of the Big Dipper Are not House Sparrows" or "Angular Velocity Is not Nitrogen."

■ **Georgia Nolph, M.D.**, associate professor of family and community medicine, has been re-elected Missouri State Director of the American Medical Women's Association.

■ **Karl Nolph, M.D.**, has been selected by the Board of Curators to serve as the University of Missouri Curators' Professor of Medicine. The honor, effective September 1, includes a salary increase of $10,000 and campus funds to help support his on-going scholarly activities. Dr. Nolph is director of the division of nephrology within the School of Medicine's department of medicine and holds the Dr. Loren E. Broaddus Distinguished Professorship. Internationally recognized for his work in kidney dialysis, Dr. Nolph leads a team of University researchers in improving Continuous Ambulatory Peritoneal Dialysis (CAPD), the dialysis technique he helped pioneer in the late 1970s.

■ **Arthur J. Robins, M.D.**, professor of psychiatry, has been awarded a Fulbright grant which will allow him to spend the 1988-89 academic year working at the National Institute of Public Administration in Kuala Lumpur, Malaysia. Winners of Fulbright grants are selected because of their outstanding academic and professional qualifications, as well as their ability and willingness to share ideas and experiences with people of diverse cultures.

■ **Joram Seggev, M.D.**, assistant professor of pulmonary medicine, presented "Effect of Prednisone on IgG and Subclasses in Bronchial Asthma" at the 44th Annual Meeting of the American Academy of Allergy and Immunology in California earlier this year.

■ A new *Division of Biostatistics* has been established at the School of Medicine to assist researchers in using statistics. **John Hewett, Ph.D.**, chairman of statistics in the College of Arts and Science, is director. "Our job is to meet with investigators and help plan research projects, develop formulative questions in statistical language and oversee data collection," he says.

University of Missouri-Kansas City

■ Six students on May 17 were inducted as junior members of UMKC's Delta Chapter of Alpha Omega Alpha at a special banquet. **Dr. Stanley Troup**, professor of Medicine, Health Care, and Human Values at the University of Cincinnati College of Medicine, was keynote speaker, with the topic, "Personal Values and Patient Care." The six new junior AOA members are: **Mike Bamshad, David Kearney, Lisa Lillicrap, Clark McKenzie, Carla Siegfried,** and **Raj TerKonda**. Housestaff AOA members inducted at the banquet were **Alan Gamis, M.D.**, instructor and resident at Children's Mercy Hospital, and **Christine Sullivan, M.D.**, instructor and resident in Emergency Health Services at Truman Medical Center. Additionally, **Chris Sirridge, M.D.**, docent and assistant professor of Medicine was named alumni AOA member, and **Ray Snider, M.D.**, professor of Surgery, was named faculty AOA member

■ Truman Medical Center this summer officially opened the doors of The Sickle Cell Center, the first center in the Kansas City area devoted to the care of adults with sickle cell anemia. The center serves as a central location that puts all of the medical care and counseling needs of sickle cell anemia patients under one umbrella, according to **Alan Lichtin, M.D.**, assistant professor and director of the center. It was made possible by an annually renewable $36,000 state grant, part of the funding for Kansas City sickle cell programs from the Missouri Department of Health, Bureau of Chronic Diseases. Additionally, Jackson County provided a one-time $20,000 grant.

■ Two fourth-year medical students are recipients of scholarships deemed very special by UMKC School of Medicine. **Elizabeth Ford** and **Michelle Rumpf** on May 18 were presented with Edward J. Twin Scholarships at the annual meeting of the Edward J. Twin Memorial Society. The annual scholarships go to students who exhibit the caring and compassion exemplified by the late Dr. Twin.

■ More than $100,000 was raised for Truman Medical Center-East's Pediatric Development Program at the May 16 Len Dawson Celebrity Golf Classic. Approximately 295 golfers participated in the event which included participation by a number of current and former players for the Kansas City Chiefs, Royals, and Comets.

■ **Louise Arnold, Ph.D.**, professor and director of the Office of Medical Education and Research, recently was selected as one of 30 faculty fellows by the Liaison Committee on Medical Education (LCME), the body responsible for medical school accreditation. In this capacity, she will be an observer-member of an LCME survey team later this year. The goals of the LCME program are to stimulate faculty interest and involvement in medical education and the accreditation process, and to develop future leadership potential in this area.

■ At a May 20 banquet, **Marjorie Sirridge, M.D.**, professor and assistant dean for Curriculum, was named Kansas City Career Woman of the Year by the Career Club of Metropolitan Kansas City. Dr. Sirridge was noted for her career-long commitment to serving as a mentor for other women.

- **Alan Lichtin, M.D.,** assistant professor of Medicine, received a faculty research grant for "Factor VIII: von Willebrand Factor Multimers in Sickle Cell Vaso-Occlusive Crisis."

- **Gary Salzman, M.D.,** docent and assistant professor of Medicine, recently was advanced to fellowship in the American College of Chest Physicians.

- Three recent graduates earned campus-wide recognition as recipients of UMKC's 1988 Vice Chancellor for Student Affairs Honor Awards. **Marty Emert, Jim Reardon,** and **Nora Yazdi** were named recipients of this award for excellence in academic achievement and service to the community.

- Medical student **Carla J. Siegfried** recently was named one of the Outstanding Young Women of America (OYWA). Now in its twenty-third year, the OYWA program is designed to honor and encourage exceptional women between the ages of 21 and 36 who have distinguished themselves in many fields of endeavor, including service to the community, professional leadership, academic achievement, business advancement, cultural accomplishments, and civic and political participation.

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ARMY RESERVE MEDICAL PROFILE NO.7

Soldier being examined for effects of high altitude

ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow, Massachusetts General Hospital, Boston, Massachusetts. Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude); Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neurosurgery Research Fellowship Training, National Institutes of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial Fellowship, National Masonic Medical Research Foundation; Albert Schweitzer Fellowship, International Albert Schweitzer Foundation; Harvard Medical School Cabot Prize for Best Senior Thesis; recently published article, "Who Shall Live and Who Shall Die" in Newsweek Magazine.

"The work I'm doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn't ask for a smoother transition. And that's true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

"Some of the projects the Army is undertaking are on the cutting edge of research. For example, I'm currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

"The quality of medicine and the caliber of people I've been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I'm giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General."

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'DYAZIDE' AS WRITTEN.

* Not for initial therapy. See brief summary.

Before prescribing, see complete prescribing information in SK&F CO. literature or PDR. The following is a brief summary.

* **WARNING**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.
Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.
Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin[ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.
Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ:L45

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New Members

■ **John J. Brems, M.D.**, 1325 South Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Brems received his preliminary education at Rockhurst College and obtained his medical degree at the St. Louis University School of Medicine in 1981. He completed his residency at St. Louis University Hospitals, St. Louis, MO. Dr. Brems specializes in general surgery.

■ **Maureen E. Dempsey, M.D.**, One Hospital Drive, Department of Child Health, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Dempsey received her preliminary education at St. Louis University and obtained her medical degree at the University of Missouri-Columbia School of Medicine in 1985. She completed her residency at the University of Missouri Health Sciences Center, Columbia, MO. Dr. Dempsey specializes in pediatrics.

■ **Alberto A. Diaz-Arias, M.D.**, One Hospital Drive, Pathology Department, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Diaz-Arias received his preliminary education at St. Louis University and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1985. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Diaz-Arias specializes in pathology.

■ **Randy M. Ennen, M.D.**, One Hospital Drive, Department of Ophthalmology, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Ennen received his preliminary education at the University of Iowa and obtained his medical degree at the Washington University School of Medicine in 1984. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Ennen specializes in ophthalmology.

■ **Larry R. Kaiser, M.D.**, 3107 Queeny Tower, Barnes Hospital, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Kaiser received his preliminary education at Tulane University and obtained his medical degree at Tulane University School of Medicine in 1977. He completed his residency at the University of California, Los Angeles, CA. Dr. Kaiser specializes in surgery.

■ **Scott J. McKnight, M.D.**, Suite 550, 2700 Hospital Drive, Kansas City 64116, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. McKnight received his preliminary education at Nebraska Wesleyan University and obtained his medical degree at the University of Nebraska School of Medicine in 1984. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. McKnight specializes in ophthalmology.

■ **John G. Phillips, M.D.**, Box 8115, Department of Otolaryngology, Washington University, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Phillips received his preliminary education at Taylor University and obtained his medical degree at the Loyola University Stritch School of Medicine in 1986. He is completing his residency at Washington University, St. Louis, MO. Dr. Phillips specializes in otolaryngology.

■ **Kenny Ratana, M.D.**, 7777 S. New Ballas Road, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Ratana received his preliminary education at the Chulalongkorn University in Bankok, Thailand and obtained his medical degree at Mahidol University in Bangkok, Thailand in 1970. He completed his residency at Nappau County Medical Center, East Meadow, NY. Dr. Ratana specializes in diagnostic radiology.

■ **Lawrence J. Rettenmaier, M.D.**, One Hospital Drive, Dept. of Medicine — Immunology/Rheumatology, University of Missouri Hospital and Clinics, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Rettenmaier received his preliminary education at Iowa State University and obtained his medical degree at the University of Iowa Medical School in 1984. He completed his residency at Butterworth Hospital, Grand Rapids, MI. Dr. Rettenmaier specializes in internal medicine.

■ **Michael S. Richardson, M.D.**, Barnes Hospital Plaza, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Richardson obtained his medical degree at the University of North Carolina-Chapel Hill in 1986. He is completing his residency at Barnes Hospital, St. Louis, MO. Dr. Richardson specializes in internal medicine.

■ **Louis T. Riley, M.D.**, 11709 Old Ballas Road, Suite 202, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Riley received his preliminary education at Earlham College and obtained his medical degree at the University of Kentucky School of Medicine in 1980. He completed two residencies, one at the University of Kentucky and the other at Washington University, St. Louis, MO. Dr. Riley specializes in obstetrics/gynecology and family practice.

■ **Catherine L. Schane, M.D.**, 3660 S. National, Suite 350, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Schane received her preliminary education at Emory University and obtained her medical degree at the University of Alabama School of Medicine in 1980. She completed her residency at the Naval Hospital, San Diego, CA. Dr. Schane specializes in anesthesiology.

■ **Daniel Scokin, M.D.**, N708, Dept. of Child Health, One Hospital Drive, University of Missouri Hospital and Clinics, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Scokin received his preliminary education at the University of the State of New York and obtained his medical degree at the Universidad Autonoma De Ciudad Juarez Instituto De Ciencas Biomedicas in 1986. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Scokin specializes in pediatrics.

■ **Liep T. Tio, M.D.**, 1115 Alaska Ave., Suite 116, West Plains 65775, has become a member of the South Central Missouri County Medical Society. Dr. Tio received his preliminary education at Airlangga University-Indonesia and obtained his medical degree at the Airlangga University Medical School in 1956. He completed his residency at Michael Reese Medical Center, Chicago, IL. Dr. Tio specializes in radiation therapy.

■ **Chris W. Woodard, M.D.**, Jewish Hospital, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Woodard received his preliminary education at Louisiana Tech University and obtained his medical degree at the Louisiana State University School of Medicine in 1986. He is completing his residency at Jewish Hospital, St. Louis, MO. Dr. Woodard specializes in internal medicine.

■ **Robert W. Wright III, M.D.,** 3030 Baltimore, Trinity Lutheran Hospital, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Wright received his preliminary education at Kansas University and obtained his medical degree at the University of Kansas Medical School in 1980. He completed his residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Wright specializes in anesthesiology.

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In Memoriam

■ **David L. Hagar, M.D.,** died May 10, 1988 at the age of 57. Dr. Hagar, a pediatrician, practiced medicine in Raytown for more than 30 years. He served as chief of the pediatrics staff at Baptist Medical Center at the time of his death. He obtained his medical degree at the University of Kansas Medical School in 1956. Dr. Hagar was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **C. Alex McBurney, M.D.,** died April 26, 1988 at the age of 83. Dr. McBurney, a family practice physician, practiced medicine in Slater for more than 40 years, before retiring in 1980. From 1934 to 1936 he worked as a doctor in CCC camps in International Falls and Owen Lake, Minn., at California, MO, and at Van Meter Park in Saline County. He also served as a first lieutenant in the medical corps with the CCC camps. He obtained his medical degree at the University of Kansas in 1932. Dr. McBurney was a member of the Saline County Medical Society.

■ **Roy E. Mitchell, M.D.,** died April 20, 1988 at the age of 65. Dr. Mitchell, a general practice physician, practiced medicine in Salem. He obtained his medical degree at the St. Louis University School of Medicine in 1950. He was a member of the Mid-Missouri County Medical Society.

■ **Nick E. Stergen, M.D.,** died May 9, 1988 at the age of 74. Dr. Stergen, an obstetrician/gynecologist, practiced medicine in St. Louis for more than 35 years before retiring in 1984 as a physician emeritus at Christian Hospital Northeast-Northwest and DePaul hospitals, and at St. Joseph Health Center in St. Charles. He grew up on the island of Rhodes in Greece and obtained his medical degree at the University of Athens in 1940. Dr. Stergen was a member of the St. Louis Metropolitan Medical Society.

■ **Paul W. Walker, M.D.,** died May 3, 1988 at the age of 86. Dr. Walker, a urologist, practiced medicine in Joplin for 44 years before retiring in 1975. He served in the Navy during World War II. He obtained his medical degree at Vanderbilt University in 1927. Dr. Walker was a member of the Jasper County Medical Society.

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

July

21-23 Clinical Allergy for the Practicing Physician — Location: Washington University Medical Center, St. Louis. Contact: Loretta Giacoletto, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6893.

August

19-21 Geriatrics Comes of Age: Patient Management Seminar — Location: Rock Lane Lodge on Indian Point, Branson, MO. Contact: Janet Perron, University of Kansas Health Education Center, 1500 Henshall Drive, Chanute, KS 66720. 316/431-3050.

26 2nd Annual Rusk Lectureship in Physical Medicine and Rehabilitation — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

September

1-2 Respiratory Emergencies: A Multidisciplinary Approach — Location: Doubletree Hotel, Overland Park, KS. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS 66103. 913/588-4488.

10-11 Phacoemulsification Course — Location: University of Missouri-Kansas City School of Medicine, Kansas City, MO. Contact: Cecilia Corteville, Eye Foundation of Kansas City, P.O. Box 24687, Kansas City, MO 64131. 816/556-3501.

14-15 Endocrine Function and Aging — Location: Clarion Hotel, St. Louis. Contact: Symposium Secretary, VA Medical Center, GRECC (111G-JB), St. Louis, MO 63125. 314/894-6510.

15-16 The Second International Vaginal Surgery Conference — Location: Adam's Mark Hotel, St. Louis, MO. Contact: Pat Daniels, Medical Administrator, St. John's Mercy Medical Center, 621 S. New Ballas, Suite 7011, St. Louis, MO 63141. 314/991-0441.

17 Primary Rheumatology — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

23-24 Immunology, Rheumatology and Allergy Symposium — Location: Westin Crown Center, Kansas City, MO. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS. 913/588-4488.

October

13-14 Skeletal Integrity in the Elderly — Location: Doubletree at Corporate Woods, Overland Park, KS. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS. 913/588-4488.

14-15 31st Annual Physicians Alumni Weekend —Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

27-29 Society of Teachers of Family Medicine, Regional Conference — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

28-29 Pulmonary Medicine in Primary Care — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

November

18-19 Obstetrics Update 1988 — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

Information for Contributors

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References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

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Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

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Physician's Recognition Awards

Ninety-six MSMA members qualified for the MSMA-AMA Physician's Recognition Award during March 1988.

The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

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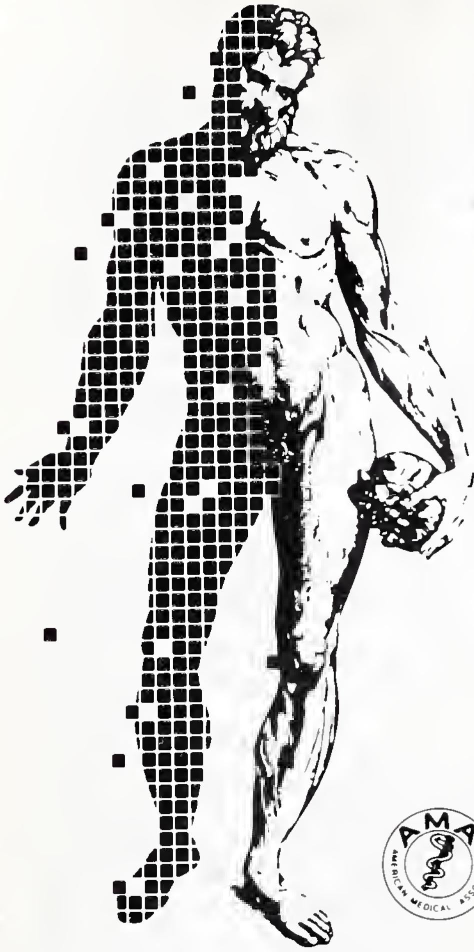

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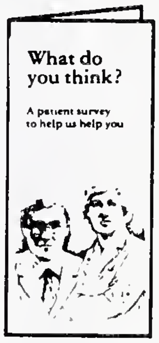

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Healthline Physician Services, an affiliate of St. Louis University Medical Center, has part-time and full-time opportunities available for physicians in Emergency Department, Clinic, and Locum Tenens work. We are presently recruiting for emergency departments in St. Louis city and metropolitan area. Excellent compensation, flexible schedules, administrative opportunities and benefits, no "on-call" responsibilities and a challenging medical environment. If you are just starting out, looking for a career change, or want to supplement your income from another source please contact: Barry Trautman, Healthline Physician Services, 3663 Lindell, St. Louis, MO 63108. 800/443-3901.

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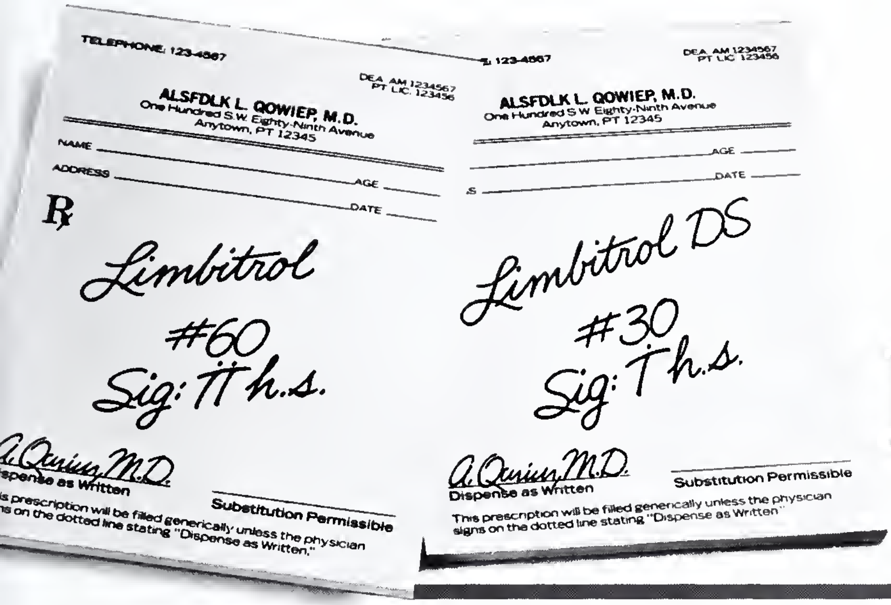
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]



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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

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Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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- First-week reduction in somatic symptoms[1]

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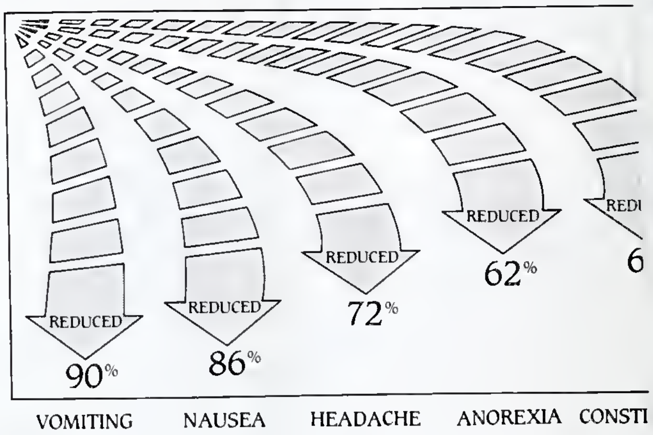

*Patients often presented with more than one somatic syn

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Missouri Medicine

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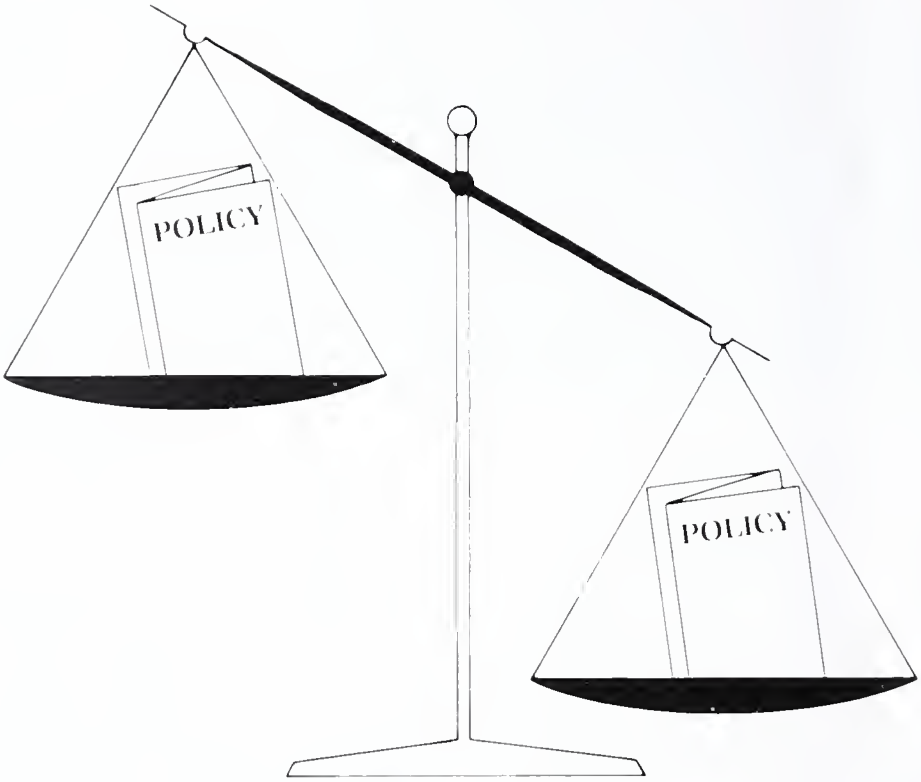
1988-89 MSMA

Membership Directory



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The detailed print of Venice, Italy featured on our August Cover was done by **John William Fries, M.D.**, of *St. Louis, MO*. The scene depicted was observed in October 1976. Dr. Fries is Clinical Professor of Radiology at St. Louis University School of Medicine as well as the Medical Director of Radiology at St. Anthony's Medical Center.

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MSMA PHONE BOOK

Missouri State Medical Association	314/636-5151
American Medical Association	312/645-5000
MSMA Physicians' Health Program	314/768-4990
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Medicare Provider Relations	1-800-392-3070
Medicare Part B Blue Cross Blue Shield Kansas City	1-800-654-9629
Missouri Department of Health	314/751-6400
Missouri Department of Social Services	314/751-2086
Missouri Patient Care Review Foundation	*(Preadmission)* 1-800-392-8060 *(General Info)* 1-800-392-1312
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Your Directory

Most regular features of Missouri Medicine have been eliminated for this issue only as we have focused on information used daily by Missouri physicians. Reviewing the Contents page, you will see the following information included in this issue. We have listed a brief explanation of each section here:

MSMA Officers, AMA Delegates and Alternates, MSMA Councilors and Vice Councilors — This photo feature assists you in identifying the leaders and representatives of MSMA.

Code Numbers for Component Medical Societies — Every MSMA member is listed in two rosters in this issue: alphabetically and by component medical society. In the alphabetical listing, the number following the physician's name corresponds with the numerical heading where the second listing is found. For example, a physician practicing in Columbia would have the code 026 following his alphabetical listing to show that he is featured in the Boone County listing in the second roster section. This code number chart also shows the page number of each component medical society section.

Designated Specialty Codes — These abbreviations follow a physician's name to show the medical specialty.

Councilor Districts and Counties in Each District — The map shows the geographical divisions for each MSMA Councilor District. The names of the Councilors for those districts and the counties in their area are listed.

Guide to Component Medical Societies — An alphabetical list of Missouri communities and their corresponding component medical society.

MSMA Committees and Commissions — A complete listing of the members of each committee and commission for 1988-89.

Directory of Medical Specialty Organizations — A list of each state specialty organization, the president's name and address, and meeting information, if available.

Directory of Metropolitan Specialty Organizations — A list of each metropolitan specialty organization, the president's name and address, and meeting information, if available.

Insurance Plans Available to MSMA Members — Type of coverage, underwriter and administrator is listed for each plan.

Missouri Volunteer Health Agencies — These groups provide assistance in the form of free or specialized equipment, rehabilitation training, counseling, specialized care, or information. These are listed so that our members may refer their patients to these services.

Alphabetical Roster — All members are listed by their last name followed by the code number and the name of their component medical society.

Component Society Roster — Sectioned according to component medical society, the physician's name, address, telephone number and medical specialty code appear here.

Component Society Executives — A listing of the directors of each component society with a full-time staff, along with the address and phone number of the society's office. ■

Missouri Medicine

Vol. 85, No. 8 *Journal of the Missouri State Medical Association* August 1988

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MSMA delegation makes impact at AMA meeting

During the Annual Meeting of the AMA House of Delegates held June 26-29 in Chicago, Missouri initiated resolutions that became AMA policy. In addition, two of our three candidates were elected to AMA office.

- Two MSMA-introduced resolutions were combined with seven other resolutions to become Substitute Resolution 101. "Office Care and Treatment Determined Unnecessary by Medicare" (MSMA Resolution #22 A-88; AMA Resolution #3) plus "Medicare Requirement of 'Medically Unnecessary Denial' " (MSMA Resolution #41 A-88; AMA Resolution #7) became incorporated in the following AMA policy:

> *Resolved*, That the American Medical Association continue to seek appropriate legislative relief from the "medically unnecessary" provisions of section 9332 (c) of the Omnibus Budget Reconciliation Act of 1986 (OBRA), including the repeal of this provision; and be it further
>
> *Resolved*, That until such time as repeal of this provision is achieved, the American Medical Association continue to press HCFA and the Medicare Part B carriers to make further changes in the implementation of this authority to correct problems being experienced, including:
>
> (1) Urging HCFA and the carriers to make the denial criteria, parameters of treatment and medical review policies available to the physician community;
> (2) Obtaining assurances that carrier medical review policies are developed with practicing physician advice;
> (3) Continuing to work to assure that physicians are notified by the carrier prior to a "medically unnecessary" notification being sent to a patient;
> (4) Urging carriers to facilitate the expeditious handling of physician request for reconsiderations and appeals of "medically unnecessary" denials;
> (5) Working to assure that patient notifications are worded in such a way so as not to put into question the attending physicians' professional judgement or the quality of care received and that the services denied be clearly identified (by more than just procedure code) in such notices, and that they be referred to as "not covered by Medicare" as opposed to "medically unnecessary"; and
> (6) Opposing required wording in the patient waiver form (advance exculpatory notice) that suggests that the physician is about to provide medically unnecessary services to his or her patient; and be it further
>
> *Resolved*, That the AMA continue to gather data and information regarding the nature and extent of problems experienced by physicians arising from the implementation of this authority, with particular attention to any evidence suggesting that non-assigned patient Medicare claims are subjected to greater scrutiny (and more likely denial) than assigned claims; and be it further
>
> *Resolved*, That should neither legislative nor administrative relief be forthcoming, the AMA then explore potential judicial relief.

- "DRGs in Rural Hospitals" (MSMA Resolution #28 A-88; AMA Resolution #5) became the following substitute resolution introduced by the Oklahoma Delegation:

> *Resolved*, That the American Medical Association recommend to the Federal Government, that many of the lower payments to rural hospitals as compared with urban hospitals for the identical diagnosis related groups are unfair and must be adjusted if rural hospitals are to survive.

- "Disability Insurance for Physicians with Infectious Diseases" (MSMA Resolution #29 A-88; AMA Resolution #6) was combined with three other resolutions to become Substitute Resolution #6 which states:

> *Resolved*, That the American Medical Association study the many and varied issues relating to physicians, residents, and medical students who become HIV or Hepatitis B positive, particularly the issue of the availability of disability insurance.
>
> *Resolved*, That because of the extreme urgency of addressing these issues, a comprehensive report be returned to the House at I-88.

- "Medicare Mandated Restrictions" (MSMA Resolution #12 A-88; AMA Resolution #4) was referred to the AMA Board of Trustees for action.

During the meeting, Hugh E. Stephenson, M.D. of Columbia was elected to the AMA Council on Medical Education for a three-year term. Anthony C. Griffin, M.D. of St. Louis was elected as the resident to serve on the AMA Council on Constitution & Bylaws. Richard Bradley, M.D. of St. Louis was not selected for the AMA Council on Medical Service.

A complete list of AMA Resolutions and the actions taken on them appears in the July 8 issue of *AM News*.

Board of Health Approves Emergency Rules

At a June 2 meeting in Jefferson City, the State Board of Health approved three PROPOSED RULES and three EMERGENCY RULES. The rules include a proposed amendment to the communicable disease rule to allow the Department of Health (DOH) to perform venipunctures, an emergency and proposed amendment to the HIV-treatment rule to allow DOH to approve individuals (who meet DOH requirements) for AZT treatment before being approved for Medicaid, proposed amendments to the hospital licensing and freestanding ambulatory surgical center regulations and to establish smoking regulations, and two emergency amendments to the blood alcohol level test regulations to increase the types of tests that may be performed by law enforcement officers.

American Medical Television

In the fall of 1988, the AMA will launch American Medical Television, a new medium for providing timely, focused clinical and socio-economic information for practicing physicians. AMA plans to work with other major medical organizations, like the MSMA, in order to be more responsive to the informational needs of physicians and their patients.

American Medical Television will air each Sunday from 10:00 a.m. to 12:00 noon Eastern Time on the Discovery Channel, a major cable television network with a scientific orientation.

Major Expansion of Medicare

President Reagan recently signed legislation designed to provide catastrophic health coverage to Medicare beneficiaries. The legislation, effective January 1, 1989, will provide coverage for up to 365 hospital days annually after payment of a yearly deductible of $564.

Under Part B, which pays for physician services, Medicare will pay 100% of the so-called "approved amount" after a patient has paid $1,370 out-of-pocket for deductibles and co-payments. In most cases the current $75 annual deductible and 20% co-payment rules will apply until the patient has encountered $6,550 in total Part B "approved" charges. At this point Medicare would begin paying 100% of the "approved amount." Charges between the MAAC and the Medicare "approved amount" will not apply toward the $1,370 cap and will remain payable by patients.

Beginning in 1991, Medicare will cover 50% of out-patient prescription drug costs after a $600 deductible. Medicare coverage will increase to 60% in 1992 and 80% in 1993. Currently, most out-patient drugs are excluded from Medicare coverage.

The cost of this major expansion (estimated by Congress at $33 billion over five years) is purported to be financed by a $4 increase in monthly Medicare premiums and a 15% income tax surcharge imposed on the roughly 40% of Medicare beneficiaries who have taxable income in excess of $11,000. This surcharge can increase to 35% in 1990 and rise by as much as 1% annually thereafter.

This legislation will help alleviate some of the financial impact of catastrophic illnesses for the elderly. However, some members of Congress worry that other taxpayers will have to help to cover the cost. Others are concerned that long-term requirements to fund this program could lead to more restrictive utilization review and physician reimbursement caps adversely impacting access and quality of care.

Board of Healing Arts Update

The first of two recent proposed rules from the State Board of Registration for the Healing Arts deals with Chapter 2-Licensing of Physicians; Proposed Rule 4 CSR 150-2.110-Continuing Medical Education (CME). The purpose of Section 334.075, RSMo (Supp. 1987) directs the Board not to renew a certificate of registration for any physician or surgeon licensed under the provision of Chapter 334 unless the licensee provides the board with satisfactory evidence that s/he has complied with the board's minimum requirements for continuing education. This rule sets forth the board's minimum requirements for continuing education.

The rule states that to receive license renewal in 1989, the licensee must complete at least 25 hours of approved CME during the 12 months immediately preceding the registration renewal data or at least 75 hours of approved CME during the 36 months immediately preceding the registration renewal date.

For license renewal in 1989 and 1990, the licensee must have completed at least 75 hours of approved CME during the period of time beginning February 1, 1988 and ending on January 31, 1991.

The rule does not limit the authority of the board to order or direct a licensee to attend additional CME courses.

Other provisions of the rule deal directly with special considerations, such as residencies, fellowships and retirements, and that information is available from the Missouri Board of Healing Arts.

This proposed rule will not cost state agencies, political subdivisions or private entities more than $500 in the aggregate.

Proposed Rule 4 CSR 150-5.001 — Definition of the Practice of Medicine. This rule defines the practice of medicine. It states that the practice of medicine is defined as diagnosing, treating, operating, prescribing, advising recommending or dispensing for any human disease, pain, injury, deformity, physical or mental condition or the prevention thereof for compensation or not. The practice of medicine also includes any activity that licensure to practice uniquely qualifies its holder to perform, including, but not limited to, activity as an expert witness, activity in any aspect of peer review or activity in an administrative capacity an essential element of which is the reliance on education or licensure as a physician and surgeon in making judgments or decisions.

This proposed rule will not cost state agencies, political subdivisions or private entities more than $500 in the aggregate.

Notice to Submit Comments: Anyone may file a statement in support of or in opposition to these Proposed Rules with the Missouri Board of Healing Arts, Gary R. Clark, Executive Secretary, P.O. Box 4, Jefferson City, MO 65101. 314/751-2334. To be considered, comments must be received within 30 days after publication of the notice in the Missouri Register. No public hearings are scheduled. ■

1988-89 Missouri State Medical Association

The Mission of the Missouri State Medical Association is to serve its members through promotion of the science and art of medicine, protection of the health of the public, and betterment of the medical profession in Missouri.

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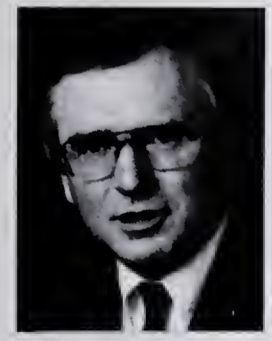

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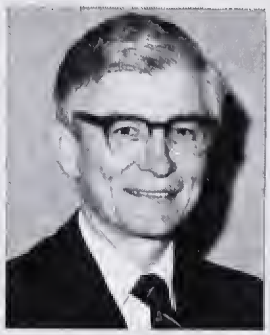

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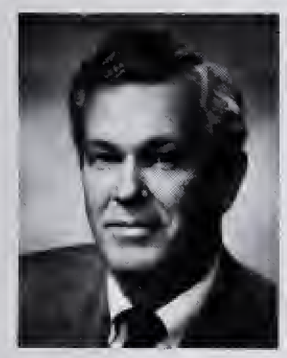

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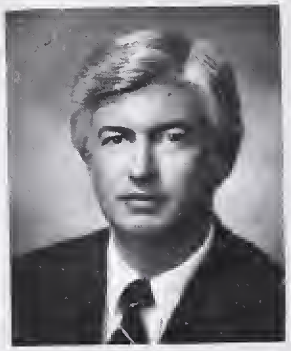

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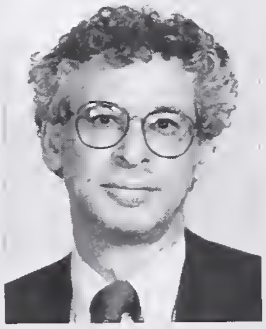

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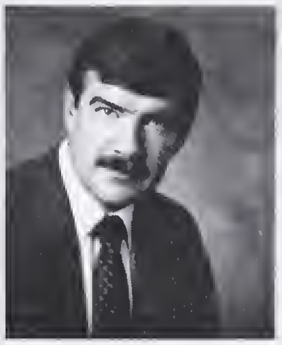
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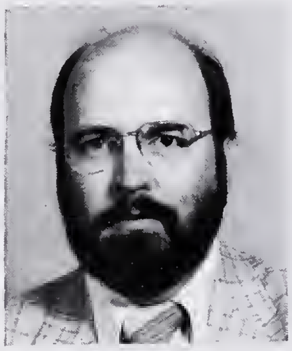
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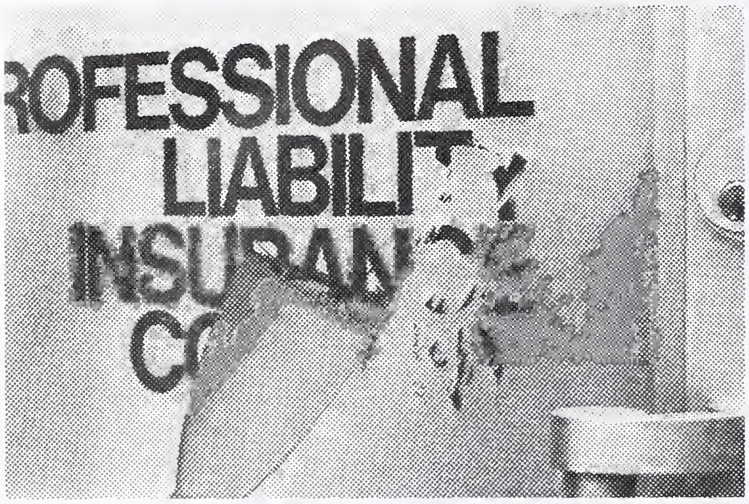

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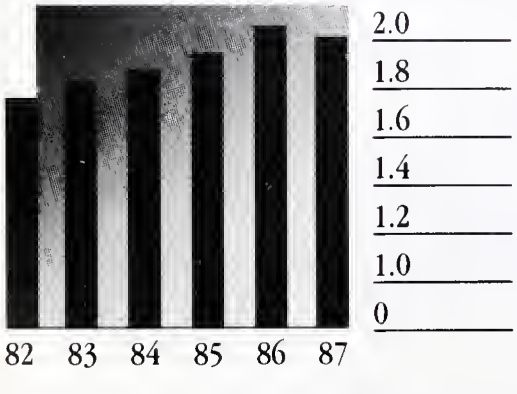

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Cipro® is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below

Lower Respiratory Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Pseudomonas aeruginosa, Haemophilus influenzae, Haemophilus parainfluenzae*, and *Streptococcus pneumoniae.*

Skin and Skin Structure Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella* morganii, *Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis*, and *Streptococcus pyogenes*

Bone and Joint Infections caused by *Enterobacter cloacae, Serratia marcescens*, and *Pseudomonas aeruginosa*

Urinary Tract Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus* mirabilis, *Providencia rettgeri, Morganella morganii, Citrobacter diversus, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus epidermidis*, and *Streptococcus faecalis*

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri,** and *Shigella sonnei** when antibacterial therapy is indicated

*Efficacy for this organism in this organ system was studied in fewer than 10 infections

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin Therapy with Cipro® may be initiated before results of these tests are known, once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN The oral administration of ciprofloxacin caused lameness in immature dogs Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION)

PRECAUTIONS

General:

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided The recommended daily dose should not be exceeded Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION)

Drug Interactions

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired, concurrent administration of these agents with ciprofloxacin should be avoided

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum This should be considered if patients are receiving both drugs concomitantly

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential If superinfection occurs during therapy, appropriate measures should be taken

Information for Patients

Patients should be advised that ciprofloxacin may be taken with or without meals The preferred time of dosing is two hours after a meal Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing Ciprofloxacin may cause dizziness or lightheadedness, therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination

Carcinogenesis, Mutagenesis, Impairment of Fertility

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below

- Salmonella/Microsome Test (Negative)
- *E coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V_{79} Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed

Pregnancy – Pregnancy Category C.

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion No teratogenicity was observed at either dose After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPAT IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS)

Nursing Mothers:

It is not known whether ciprofloxacin is excreted in human milk, however, it is known that ciproflox excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk Because and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug mother.

Pediatric Use

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals WARNINGS)

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated During clinical investigation, 2,799 patients received 2,86B cour the drug Adverse events that were considered likely to be drug related occurred in 7.3% of courses, po related in 9 2%, and remotely related in 3 0% Ciprofloxacin was discontinued because of an adverse ev 3.5% of courses, primarily involving the gastrointestinal system (1 5%), skin (0.6%), and central nervous s (0.4%)

The most frequently reported events, drug related or not, were nausea (5 2%), diarrhea (2.3%), vo (2 0%), abdominal pain/discomfort (1 7%), headache (1 2%), restlessness (1.1%), and rash (1.1%)

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below Those typ quinolones are italicized

GASTROINTESTINAL *(See above)*, painful oral mucosa, oral candidiasis, dysphagia, intestinal perfor gastrointestinal bleeding

CENTRAL NERVOUS SYSTEM *(See above), dizziness, lightheadedness, insomnia, nightmares, hall tions, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weak malaise, anorexia, phobia, depersonalization, depression, paresthesia*

SKIN/HYPERSENSITIVITY *(See above), pruritus, urticaria, photosensitivity, flushing, fever,* *angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpig tion, erythema nodosum.

SPECIAL SENSES *blurred vision, disturbed vision, (change in color perception, overbrightness of l decreased visual acuity, diplopia, eye pain, tinnitus, bad taste.*

MUSCULOSKELETAL *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gou

RENAL/UROGENITAL *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral blee vaginitis, acidosis

CARDIOVASCULAR palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pe myocardial infarction, cardiopulmonary arrest, cerebral thrombosis

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchos pulmonary embolism.

Most of these events were described as only mild or moderate in severity, abated soon after the dru discontinued, and required no treatment

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judg investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interactio ciprofloxacin

Adverse Laboratory Changes Changes in laboratory parameters listed as adverse events without regard t relationship

Hepatic – Elevations of ALT (SGPT) (1.9%), AST (SGOT) (1 7%), alkaline phosphatase (0 B%), LDH (0 serum bilirubin (0 3%)

Hematologic – eosinophilia (0 6%), leukopenia (0 4%), decreased blood platelets (0.1%), elevated platelets (0 1%), pancytopenia (0.1%)

Renal – Elevations of. Serum creatinine (1 1%), BUN (0 9%)

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED

Other changes occurring in less than 0 1% of courses were Elevation of serum gammaglutamyl transfe elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, an bleeding diathesis, increase in blood monocytes, and leukocytosis

OVERDOSAGE

Information on overdosage in humans is not available In the event of acute overdosage, the stomach shou emptied by inducing vomiting or by gastric lavage The patient should be carefully observed and given supp treatment Adequate hydration must be maintained In the event of serious toxic reactions from overdo hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 h

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be tr with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given eve hours

The recommended dosage for infectious diarrhea is 500 mg every 12 hours

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION)

HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, a Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION)

CONVENIENT *B.I.D.* DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosag
Respiratory Tract* Bone and Joint* Skin/Skin Structure*	Mild/Moderate	500 mg *B.*
	Severe/Complicated	750 mg *B.*
Urinary Tract*	Mild/Moderate	250 mg *B.*
	Severe/Complicated	500 mg *B.*
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg *B.*

*** Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary**

For further information, contact the Miles Information Service 1-800-642-4776. In VA, call collect: 703-391-7888.

COMMITTED TO THERAPEUTIC EFFICIEN

MILES

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Pharmaceutical Divis
400 Morgan Lane
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C09327 MLR

Designated Specialty Codes

The following specialties are recognized by the American Medical Association.

A	Allergy
ABS	Abdominal Surgery
ADL	Adolescent Medicine
AI	Allergy and Immunology
AM	Aerospace Medicine
AN	Anesthesiology
BE	Broncho-Esophagology
BLB	Bloodbanking
CD	Cardiovascular Diseases
CDS	Cardiovascular Surgery
CHN	Child Neurology
CHP	Child Psychiatry
CLP	Clinical Pathology
CRS	Colon and Rectal Surgery
D	Dermatology
DIA	Diabetes
DMP	Dermatopathology
DR	Diagnostic Radiology
EM	Emergency Medicine
END	Endocrinology
FOP	Forensic Pathology
FP	Family Practice
GE	Gastroenterology
GER	Geriatrics
GP	General Practice
GPM	General Preventive Medicine
GS	General Surgery
GYN	Gynecology
HEM	Hematology
HNS	Head and Neck Surgery
HS	Hand Surgery
HYP	Hypnosis
ID	Infectious Diseases
IG	Immunology
IM	Internal Medicine
LAR	Laryngology
LM	Legal Medicine
MFS	Maxillofacial Surgery
N	Neurology
NA	Neuropathology
ND	Neoplastic Diseases
NEP	Nephrology
NM	Nuclear Medicine
NPM	Neonatal-Perinatal Medicine
NR	Nuclear Radiology
NS	Neurological Surgery
NTR	Nutrition
OBG	Obstetrics and Gynecology
OBS	Obstetrics
OM	Occupational Medicine
ON	Oncology
OPH	Ophthalmology
ORS	Orthopedic Surgery
OS	Other, i.e., physician designated a specialty other than appearing here.
OT	Otology
OTO	Otorhinolaryngology
P	Psychiatry
PA	Clinical Pharmacology
PD	Pediatrics
PDA	Pediatric Allergy
PDC	Pediatric Cardiology
PDE	Pediatric Endocrinology
PDR	Pediatric Radiology
PDS	Pediatric Surgery
PH	Public Health
PHO	Pediatric Hematology-Oncology
PM	Physical Medicine and Rehabilitation
PNP	Pediatric Nephrology
PS	Plastic Surgery
PSF	Facial Plastic Surgery
PTH	Pathology
PUD	Pulmonary Diseases
PYA	Psychoanalysis
PYM	Psychosomatic Medicine
R	Radiology
RHI	Rhinology
RHU	Rheumatology
RIP	Radioisotopic Radiology
TR	Therapeutic Radiology
TRS	Traumatic Surgery
TS	Thoracic Surgery
U	Urology
US	Urological Surgery

Note: No code will appear for those physicians who have not designated a specialty.

Letters to the Editor

What do you think?

Write: "Letters to the Editor"
Missouri Medicine
P.O. Box 1028
Jefferson City, Mo. 65101

my•o•pia

\mī-ˈō-pē-ə\: deficiency of foresight

SYMPTOMS: Most often observed in professionals who are inundated with day-to-day responsibilities. Dedicated to the needs of others, subject becomes focused on today… at the expense of tomorrow's full potential. May have complicated, expensive retirement plan with scattered investments and sometimes unfocused or nonexistent financial objectives. The lack of sufficient time and professional guidance may result in feelings of anxiety over future well-being of self, family and staff.

DIAGNOSIS: Financial myopia (common to this overworked peer group).

COMPLICATIONS: May not know where to turn for advice that is professional, comprehensive, personalized, flexible, diverse and *painless.*

R_x: As a member of the Missouri State Medical Association, you are eligible for treatment by highly qualified retirement planning specialists—no charge for initial consultation or subsequent quarterly or semi-annual checkups. For security and peace of mind tomorrow (and possibly lower costs), call today for Michael Grimes - Director or Thomas Knapko - Associate Director at E.F. Hutton. Call collect 314-725-9690.

CONTRAINDICATIONS: None.

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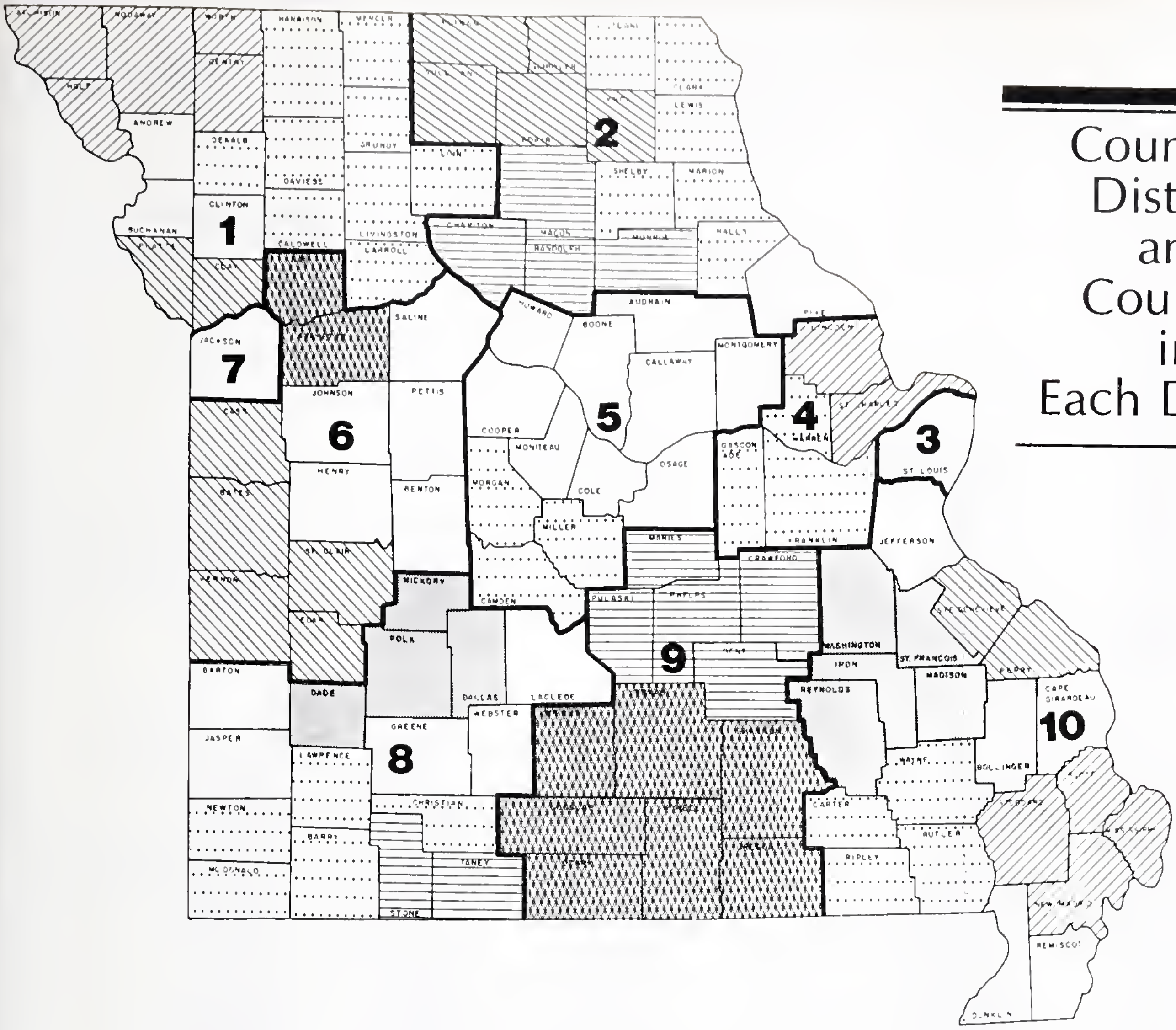
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* Counties with no medical organization.

Guide to Component Medical Societies

Following is a list of Missouri communities in which MSMA member-physicians are in active practice or reside. Name of the community is followed by the county in which it is located and the medical society to which physicians of that community normally would belong.

A

Town	*County*	*Medical Society*
Advance	Stoddard	SEMO
Affton	St. Louis	St. Louis Metropolitan
Albany	Gentry	Northwest Missouri
Altenburg	Perry	Perry-Ste. Genevieve
Appleton City	St. Clair	West Central
Arnold	Jefferson	Jefferson
Arrow Rock	Saline	Saline
Ashland	Boone	Boone
Augusta	St. Charles	St. Charles-Lincoln
Aurora	Lawrence	Ozarks
Ava	Douglas	South Central

B

Town	*County*	*Medical Society*
Ballwin	St. Louis	St. Louis Metropolitan
Bethany	Harrison	Grand River
Blue Springs	Jackson	Jackson
Bolivar	Polk	Dallas-Hickory-Polk-Dade
Bonne Terre	St. Francois	Mineral Area
Boonville	Cooper	Cooper
Branson	Taney	Tri-Lakes
Brentwood	St. Louis	St. Louis Metropolitan
Bridgeton	St. Louis	St. Louis Metropolitan
Brookfield	Linn	Grand River
Brunswick	Chariton	Chariton-Macon-Monroe-Randolph
Buffalo	Dallas	Dallas-Hickory-Polk-Dade
Butler	Bates	West Central

C

Town	*County*	*Medical Society*
Cabool	Texas	South Central
Cainsville	Harrison	Grand River
California	Moniteau	Moniteau
Camdenton	Camden	Lake of the Ozarks
Cape Girardeau	Cape Girardeau	Cape Girardeau
Cardwell	Dunklin	Dunklin
Carrollton	Carroll	Grand River
Carthage	Jasper	Jasper
Caruthersville	Pemiscot	Pemiscot
Cassville	Barry	Ozarks
Centralia	Boone	Boone
Charlack	St. Louis	St. Louis Metropolitan
Charleston	Mississippi	SEMO
Chesterfield	St. Louis	St. Louis Metropolitan
Chillicothe	Livingston	Grand River
Clayton	St. Louis	St. Louis Metropolitan
Climax Springs	Camden	Lake of the Ozarks
Clinton	Henry	Henry
Columbia	Boone	Boone
Concordia	Lafayette	Lafayette-Ray
Crestwood	St. Louis	St. Louis Metropolitan
Creve Coeur	St. Louis	St. Louis Metropolitan
Crystal City	Jefferson	Jefferson
Cuba	Crawford	Mid-Missouri

D

Town	*County*	*Medical Society*
Deepwater	Henry	Henry
Desloge	St. Francois	Mineral Area
DeSoto	Jefferson	Jefferson
Dexter	Stoddard	SEMO
Doniphan	Ripley	Butler-Wayne-Ripley-Carter

E

Town	*County*	*Medical Society*
East Prairie	Mississippi	SEMO
Edina	Knox	North Central
Eldon	Miller	Lake of the Ozarks
El Dorado Springs	Cedar	West Central
Ellington	Reynolds	Mineral Area
Ellisville	St. Louis	St. Louis Metropolitan
Elsberry	Lincoln	St. Charles-Lincoln
Eureka	St. Louis	St. Louis Metropolitan
Excelsior Springs	Clay	Clay-Platte

F

Town	*County*	*Medical Society*
Fairdealing	Ripley	Butler-Wayne-Ripley-Carter
Fairfax	Atchison	Northwest Missouri
Farber	Audrain	Audrain
Farmington	St. Francois	Mineral Area
Fayette	Howard	Howard
Fenton	St. Louis	St. Louis Metropolitan
Ferguson	St. Louis	St. Louis Metropolitan
Festus	Jefferson	Jefferson
Flat River	St. Francois	Mineral Area
Florissant	St. Louis	St. Louis Metropolitan
Fordland	Webster	Webster
Forsyth	Taney	Tri-Lakes
Fort Leonard Wood	Pulaski	Mid-Missouri
Fredericktown	Madison	Mineral Area
Frontenac	St. Louis	St. Louis Metropolitan
Fulton	Callaway	Callaway

G

Town	*County*	*Medical Society*
Galena	Jackson	Jackson
Gallatin	Daviess	Grand River
Gladstone	Clay	Clay-Platte
Glasgow	Howard	Howard
Glendale	St. Louis	St. Louis Metropolitan
Grandview	Jackson	Jackson
Grant City	Worth	Northwest
Greenwood	Jackson	Jackson

H

Town	*County*	*Medical Society*
Hamilton	Caldwell	Grand River
Hannibal	Marion	Marion-Ralls-Shelby
Harrisburg	Boone	Boone
Harrisonville	Cass	West Central
Hartsburg	Boone	Boone
Hayti	Pemiscot	Pemiscot
Hazelwood	St. Louis	St. Louis Metropolitan
Herculaneum	Jefferson	Jefferson
Hermann	Gasconade	Franklin-Gasconade-Warren
Higginsville	Lafayette	Lafayette-Ray
High Ridge	St. Louis	St. Louis Metropolitan
Hillsboro	Jefferson	Jefferson
Holden	Johnson	Johnson
Holts Summit	Callaway	Callaway
Hornersville	Dunklin	Dunklin
House Springs	St. Louis	St. Louis Metropolitan
Houston	Texas	South Central
Huntsville	Randolph	Chariton-Macon-Monroe-Randolph

Town	*County*	*Medical Society*
I		
Independence	Jackson	Jackson
Ironton	Iron	Mineral Area
J		
Jackson	Cape Girardeau	Cape Girardeau
Jefferson City	Cole	Cole
Joplin	Jasper	Jasper
K		
Kansas City	Jackson	Jackson
Kennett	Dunklin	Dunklin
Kimberling City	Stone	Tri-Lakes
Kirksville	Adair	North Central
Kirkwood	St. Louis	St. Louis Metropolitan
Knob Noster	Johnson	Johnson
L		
LaGrange	Lewis	Northeast
Lamar	Barton	Barton
Lebanon	Laclede	Laclede
Lee's Summit	Jackson	Jackson
Lemay	St. Louis	St. Louis Metropolitan
Lexington	Lafayette	Lafayette-Ray
Liberty	Clay	Clay-Platte
Linn	Osage	Cole
Louisiana	Pike	Pike
Lutesville	Bollinger	Mineral Area
M		
Macon	Macon	Chariton-Macon-Monroe-Randolph
Malden	Dunklin	Dunklin
Manchester	St. Louis	St. Louis Metropolitan
Mansfield	Wright	South Central
Maplewood	St. Louis	St. Louis Metropolitan
Marceline	Linn	Grand River
Marionville	Lawrence	Ozarks
Marshall	Saline	Saline
Marshfield	Webster	Webster
Marthasville	Warren	Franklin-Gasconade-Warren
Maryland Heights	St. Louis	St. Louis Metropolitan
Maryville	Nodaway	Northwest Missouri
Mexico	Audrain	Audrain
Moberly	Randolph	Chariton-Macon-Monroe-Randolph
Monett	Barry	Ozarks
Monroe City	Monroe	Chariton-Macon-Monroe-Randolph
Mound City	Holt	Northwest Missouri
Mount Vernon	Lawrence	Ozarks
Mountain Grove	Wright	South Central
N		
Neosho	Newton	Ozarks
Nevada	Vernon	West Central
New Haven	Franklin	Franklin-Gasconade-Warren
New London	Ralls	Northeast
Nixa	Christian	Ozarks
Normandy	St. Louis	St. Louis Metropolitan
North Kansas City	Clay	Clay-Platte
O		
Oak Grove	Jackson	Jackson
Odessa	Lafayette	Lafayette-Ray
O'Fallon	St. Charles	St. Charles-Lincoln
Osage Beach	Camden	Lake of the Ozarks
Osceola	St. Clair	West Central
Overland	St. Louis	St. Louis Metropolitan
Owensville	Gasconade	Franklin-Gasconade-Warren
P		
Pacific	Franklin	Franklin-Gasconade-Warren
Palmyra	Marion	Northeast
Paris	Monroe	Chariton-Macon-Monroe-Randolph
Parkville	Platte	Clay-Platte
Perryville	Perry	Perry-Ste. Genevieve
Pierce City	Lawrence	Ozarks
Platte City	Platte	Clay-Platte
Plattsburg	Clinton	Clinton
Pleasant Hill	Cass	West Central
Poplar Bluff	Butler	Butler-Wayne-Ripley-Carter
Portageville	New Madrid	SEMO
Potosi	Washington	Mineral Area
Puxico	Stoddard	SEMO
R		
Raymore	Cass	West Central
Raytown	Jackson	Jackson
Reeds Spring	Stone	Tri-Lakes
Republic	Greene	Greene
Richland	Pulaski	Mid-Missouri
Richmond	Ray	Lafayette-Ray
Richmond Heights	St. Louis	St. Louis Metropolitan
Rocheport	Boone	Boone
Rock Port	Atchison	Northwest
Rogersville	Webster	Webster
Rolla	Phelps	Mid-Missouri
Rosendale	Andrew	Andrew
S		
St. Ann	St. Louis	St. Louis Metropolitan
St. Charles	St. Charles	St. Charles-Lincoln
St. Clair	Franklin	Franklin-Gasconade-Warren
Ste. Genevieve	Ste. Genevieve	Perry-Ste. Genevieve
St. Joseph	Buchanan	Buchanan
St. Louis	St. Louis	St. Louis Metropolitan
St. Peters	St. Charles	St. Charles-Lincoln
Salem	Dent	Mid-Missouri
Sarcoxie	Jasper	Jasper
Savannah	Andrew	Andrew
Sedalia	Pettis	Pettis
Shelbina	Shelby	Northeast
Shell Knob	Barry	Ozarks
Shrewsbury	St. Louis	St. Louis Metropolitan
Sikeston	Scott	SEMO
Slater	Saline	Saline
Smithton	Pettis	Pettis
Smithville	Clay	Clay-Platte
Springfield	Greene	Greene
Stanberry	Gentry	Northwest
Steelville	Crawford	Mid-Missouri
Strafford	Greene	Greene
Sullivan	Franklin	Franklin-Gasconade-Warren
Sweet Springs	Saline	Saline
T		
Tarkio	Atchison	Northwest
Thayer	Oregon	South Central
Town and Country	St. Louis	St. Louis
Trenton	Grundy	Grand River
Troy	Lincoln	St. Charles-Lincoln
U		
Union	Franklin	Franklin-Gasconade-Warren
University City	St. Louis	St. Louis Metropolitan
V		
Valley Park	St. Louis	St. Louis Metropolitan
Van Buren	Carter	Butler-Wayne-Ripley-Carter
Versailles	Morgan	Lake of the Ozarks
W		
Warrensburg	Johnson	Johnson
Warrenton	Warren	Franklin-Gasconade-Warren
Washington	Franklin	Franklin-Gasconade-Warren
Waverly	Lafayette	Lafayette-Ray
Waynesville	Pulaski	Mid-Missouri
Webb City	Jasper	Jasper
Webster Groves	St. Louis	St. Louis Metropolitan
Wellsville	Montgomery	Montgomery
Wentzville	St. Charles	St. Charles-Lincoln
Weston	Platte	Clay-Platte
West Plains	Howell	South Central
Williamsville	Wayne	Butler-Wayne-Ripley
Willow Springs	Howell	South Central
Winchester	St. Louis	St. Louis Metropolitan
Windsor	Henry	Henry
Winston	Daviess	Grand River

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James R. Criscione, Jr., M.D.	Kirkwood (1990)
Carl Pearman, M.D.	Columbia (1990)
Edward C. Felker, III, M.D.	Sikeston (1990)
Theodore Glenn, M.D.	Cape Girardeau (1990)
Thomas M. Ahmann, M.D.	Mexico (1989)
William I. Stryker, M.D.	St. Louis (1989)
C. E. Ridenhour, M.D.	Columbia (1989)
Donald McIntosh, M.D.	Lee's Summit (1989)

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Gerald J. Duling, M.D.	St. Charles (1991)
Harry Miller, M.D.	Clinton (1991)
Gerald Bart, M.D.	St. Louis (1991)
Purificacion Florendo, M.D.	Hannibal (1991)
Turner L. Minnigerode, M.D.	Kansas City (1990)
Dwight L. Deardeuff, M.D.	Rolla (1990)
George X. Trimble, M.D.	Kansas City (1990)
Michael R. Freeman, M.D.	Cape Girardeau (1990)
Raymond O. Frederick, M.D.	St. Louis (1990)
John Renner, M.D.	Kansas City (1989)
Robert B. Brigden, M.D.	Joplin (1989)
W. Wayne Boydston, M.D.	Odessa (1989)
Luis Anglo, M.D.	St. Louis (1989)
Edward Jenkins, M.D.	Waynesville (1989)

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Nicholas F. Robinson, M.D.	Kennett (1991)
Melvin R. Hayden, M.D.	Camdenton (1991)
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James J. Bass, M.D.	Rolla (1991)
Carl Strauss, M.D.	Kansas City (1990)
Martha Reed, M.D.	Hillsboro (1990)
F. David Muegge, M.D.	Springfield (1990)
Lewis C. Vollmar, Jr., M.D.	St. Louis (1990)
Clarence C. Reynolds, M.D.	Kansas City (1990)
Gerald Moritz, M.D.	St. Louis (1989)
T. J. Cooper, M.D.	Fulton (1989)
Jeff Schulman, M.D.	St. Louis (1989)
Gerald Hoxworth, M.D.	Mexico (1989)
Milamari A. Cunningham, M.D.	Columbia (1989)

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James Alyea, M.D., *Anesthesiology*	Columbia
Peter Muelleman, M.D., *Dermatology*	Independence
Timothy Turner, D.O., *Emergency Physicians*	St. Louis
David W. Hall, M.D., *Family Physicians*	Rogersville
William J. Crowley, Jr., M.D., *Neurology*	Columbia
Paul E. Stohr, M.D., *Neurosurgery*	St. Louis
Larry W. Piebenga *Ophthalmology*	Kansas City
Michael S. Clarke, M.D., *Orthopaedics*	Springfield
J. Regan Thomas, M.D., *Otolaryngology*	St. Louis
Robert W. Brangle, M.D., *Pathology*	St. Louis
Robert Edmonds, M.D., *Pediatrics*	Sedalia
Charles R. Kelly, M.D., *Physical Medicine & Rehabilitation*	Kansas City
Richard T. Quick, M.D., *Psychiatry*	St. Louis
Edward H. Andres, M.D., *Surgery*	St. Joseph
Thomas A. Beller, M.D., *Thoracic*	Kansas City
Dana Weaver, M.D., *Urology*	Columbia

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Stephen Hamburger, M.D.	Shawnee Mission, KS
Jordan W. Burkey, M.D., *Editor Emeritus*	Springfield

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Stephen Vilmer, M.D.	Shawnee Mission, KS (1990)
William E. Stricker, M.D.	Rolla (1990)
Andrew B. Kaufman, M.D.	Kansas City (1990)
Thomas C. Sparkman, M.D.	Cape Girardeau (1990)
Curtis C. Cox, M.D.	Jefferson City (1990)
Natu Patel, M.D.	Bethany (1989)
Benjamin I. Albano, M.D.	Crystal City (1989)
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Carlo P. Caciolo, M.D.	St. Louis (1989)
Marla J. Tobin, M.D.	Higginsville (1989)
Michaele M. Penkoske, M.D.	St. Charles (1990)
Jo-Ellyn M. Ryall, M.D.	St. Louis (1991)
Joe E. Belew, M.D.	Chesterfield (1991)
Carl Doerhoff, M.D.	Jefferson City (1991)
Warren C. Lovinger, Jr., M.D.	Nevada (1991)

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The Missouri State Medical Foundation — MSMF — was created by the Missouri State Medical Association for the express purpose of giving financial assistance to deserving young Missourians who will be tomorrow's doctors.

Send your check today to the Missouri State Medical Foundation, 113 Madison St., P.O. Box 1028, Jefferson City, MO 65101.

Missouri Volunteer Health Agencies

Patients of MSMA members are eligible, in some instances, to receive assistance from various volunteer health agencies in the state. Assistance may be in the form of free or subsidized specialized equipment, rehabilitation training, counseling, specialized care, or information.

In an effort to assist MSMA members in attaining assistance for their patients, the following list of Missouri volunteer health agencies has been compiled. In some cases, a statewide organization is listed. In instances in which an organization is limited to a certain portion of the state, several organizations may be listed under one heading.

Arthritis

Arthritis Foundation, Eastern Missouri Chapter
7315 Manchester, St. Louis 63143
314-644-3488

Arthritis Foundation, Western Missouri-Greater Kansas City Chapter
8301 State Line, Suite 117, Kansas City 64114
816-361-7002

Arthritis Institute of Greater Kansas City
6601 Rockhill Rd., Kansas City 64131
816-444-5899

Asthma and Allergy

Asthma and Allergy Foundation of America, St. Louis Chapter
6611 Clayton Rd., Ste. 103, St. Louis 63117
314-726-6866

Birth Defects

March of Dimes, Northern Missouri Chapter
1310 Business 63 South, Columbia 65201
314-449-0573

Blood Transfusion and Tissue Bank

Missouri/Illinois Regional Blood Services
4050 Lindell, St. Louis 63108
314-658-2000

Cancer

American Cancer Society, Missouri Division, Inc.
P.O. Box 1066, 3322 American Ave., Jefferson City 65102
314-893-4800

Missouri Cancer Information Service
Boone Hospital Center
1600 East Broadway, Columbia 65201
1-800-4-CANCER
314-875-3506 in Columbia

Cerebral Palsy

United Cerebral Palsy Association of Missouri, Inc.
125 W. Dunklin St., Suite 35, Jefferson City 65101
314-636-5334

Cystic Fibrosis

Cystic Fibrosis Foundation, Gateway Chapter
7730 Carondelet, St. Louis 63105
314-721-2490

Cystic Fibrosis Foundation, Heart of America Chapter
8080 Ward Parkway, #250, Kansas City 64114
816-363-5636

Diabetes

American Diabetes Association
811 Cherry St., P.O. Box 11
Columbia 65205
314-443-8611

American Diabetes Association, Heart of America Region
9201 Ward Parkway, Suite 300, Kansas City 64114
816-361-3361

American Diabetes Association, Missouri Affiliate, Inc.
213 Adams St., Jefferson City 65101
314-636-5552

American Diabetes Association, Ozark Region
Cox Medical Center North
1423 North Jefferson, Room 165B
Springfield 65802
417-864-5091

American Diabetes Association, St. Louis Chapter of the Missouri Affiliate
1790 S. Brentwood Blvd., St. Louis 63144
314-968-3196

Disabled Children and Adults

Missouri Easter Seal Society, Inc.
1982 Concourse, Ste. 100, St. Louis 63146
314-569-0822

Epilepsy

Epilepsy Federation, St. Louis Region
7305 Manchester, St. Louis 63143
314-645-6969

Greater Kansas City Epilepsy League
4949 Rockhill Rd., Kansas City 64110
816-276-8940

Heart

American Heart Association, Missouri Affiliate, Inc.
P.O. Box Q, 105 E. Ash, Suite 2, Columbia 65205
314-442-3193

Hemophilia

Bi-State Hemophilia Association
3127 A South Grand, St. Louis 63118

Kidney

National Kidney Foundation of Eastern Missouri and Metro East, Inc.
Olivette Executive Park, St. Louis 63132
314-863-5858

National Kidney Foundation of Kansas and Western Missouri
One East 34th St., Kansas City 64111
816-756-2002

Lungs

American Lung Association, Springfield Branch
1835 S. Stewart, Springfield 65804
417-883-7177

American Lung Association, Central Missouri Branch
P.O. Box 1321, Columbia 65205
314-874-2616

American Lung Association of Eastern Missouri
1118 Hampton Ave., St. Louis 63139-3196
314-645-5505

American Lung Association of Western Missouri
2007 Broadway, Kansas City 64108
816-842-5242

American Lung Association, Southeast Missouri Branch
908 Themis, Cape Girardeau 63701
314-334-4007

Multiple Sclerosis

Multiple Sclerosis Society, Gateway Area Chapter
915 Olive St., Suite 815, St. Louis 63101
314-241-8285

Multiple Sclerosis Society, Mid-America Chapter
P.O. Box 2292, Shawnee Mission, KS 66201
1-800-332-0274 ext. CURE MS (KS) or
1-800-255-0390 ext. CURE MS
913-432-3926

Multiple Sclerosis Society, Mid-Missouri Branch
1201 Paquin G-2, Columbia 65201
314-875-6767

Multiple Sclerosis Society, Ozark Branch
2149 S. Oak Grove, Springfield 65804
417-882-8128

Muscular Dystrophy

Muscular Dystrophy Association, Central Missouri Chapter
914 North College, Suite 2, Columbia 65201
314-442-5154

Muscular Dystrophy Association, Inc.
3910 Old Highway 94 S., St. Charles 63303-6752
314-928-9911

Muscular Dystrophy Association, Inc., Greater Ozarks Chapter
435 S. Union, Suite K, Springfield 65802-2657
417-866-5117

Muscular Dystrophy Association, Inc., Missouri Valley Chapter
301 E. Armour, Suite 305, Kansas City 64111
816-931-7750

Muscular Dystrophy Association, Inc., Mississippi Valley Chapter
1023 S. Big Bend Blvd., St. Louis 63117
314-644-2828

Muscular Dystrophy Association, Twin Rivers Chapter
100 Broadway, 2nd Floor, Cape Girardeau 63701
314-335-4400

Myasthenia Gravis

Myasthenia Gravis Foundation, Inc., Greater Kansas City Chapter
4949 Rockhill Rd., Kansas City 64110
816-276-8310

Neurofibromatosis

The National Neurofibromatosis Foundation, Inc., Missouri Chapter
1810 Dougherty Estates Drive, Manchester 63021
314-391-7872

Red Cross

American Red Cross, Greater Kansas City Chapter
211 W. Armour, Kansas City 64111
816-932-6000

American Red Cross, Missouri/Illinois Regional Blood Services
4050 Lindell Blvd., St. Louis 63108
314-658-2000

Retarded Citizens

Barry-Lawrence ARC
P.O. Box 244, Monett 65708
417-235-3596

Clay-Platte ARC
7211 N. Broadway, Kansas City 64118
816-436-1704

Gentry County ARC
P.O. Box 219, Albany 64402
816-726-4155

Greene County Association for ARC, Inc.
Activities Ctr., 1501 East Pythian, Springfield 65802
417-864-7887

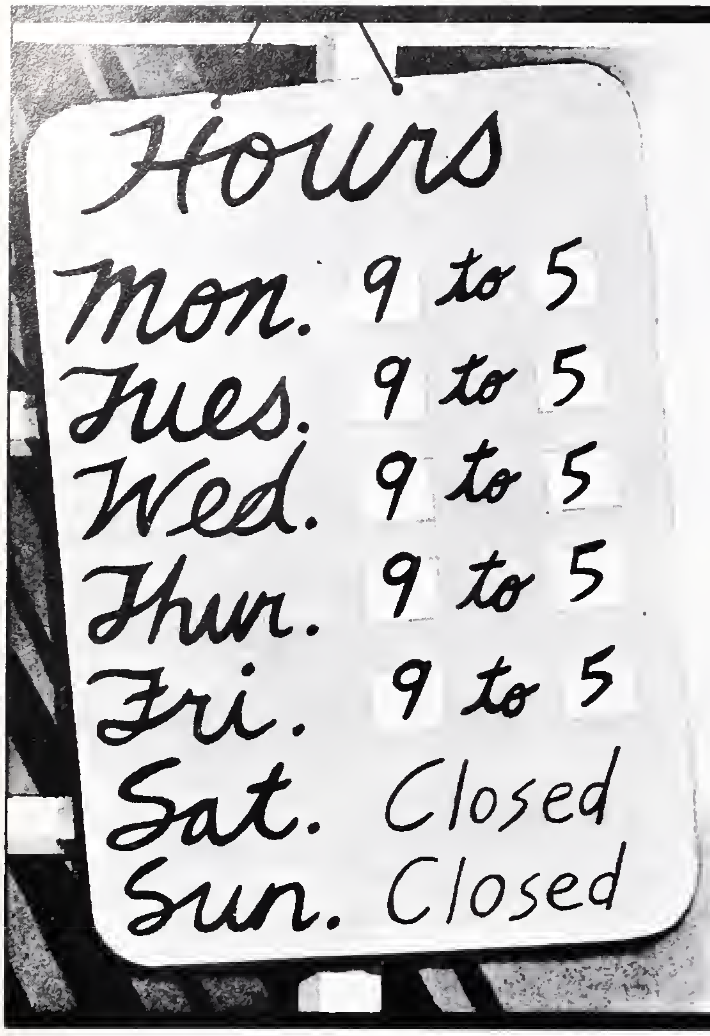
Joplin Area ARC
1718 Garrison, Carthage 64836
417-358-2980

St. Charles County ARC
P.O. Box 9634, 613 Westridge Dr., O'Fallon 63366
314-281-1903

Stoddard County ARC
Rt. 2, Box 11, Dexter 63841
314-624-8525

Sudden Infant Death Syndrome

SIDS Resources, Inc.
1600 A. South Big Bend, St. Louis 63117
314-644-2056



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Clayton, MO 63105
(314) 863-7777

Western Missouri Administrator
2420 Pershing Road
Kansas City, MO 64108
(816) 842-6670

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Directory of Medical Specialty Organizations

Any specialty group not listed here is invited to send the name of the group's president and the time, date and place of the group's next meeting to: Medical Specialty Listing, MISSOURI MEDICINE, P.O. Box 1028, Jefferson City, MO 65102.

** The 131st MSMA Annual Convention will be held April 13-16, 1989 at the Marriott Pavilion Hotel in St. Louis.*

Specialty	President	Next Meeting
Missouri State Allergy Association	Michael L. Loren, M.D. 17500 Med. Ctr. Parkway Suite 6 Independence, MO 64057	*MSMA Annual Convention, St. Louis
Missouri Society of Anesthesiologists	Milamari Cunningham, M.D. 8202 S. Bennett Dr. Rt. 12 Columbia, MO 65201	*MSMA Annual Convention, St. Louis
Missouri Dermatological Society, Inc.	Joe Duvall, M.D. 621 S. New Ballas Rd. St. Louis, MO 63141	*MSMA Annual Convention, St. Louis
Missouri Chapter American College of Emergency Physicians	Michael Weaver, M.D. St. Luke's Hospital 44th & Wornall Rd. Kansas City, MO 64111	August 3-5, 1988 Tan-Tar-A, Lake Ozark
Missouri Academy of Family Physicians	R. Raymond Lyle, M.D. Gunn Clinic Versailles, MO 65804	June 8-11, 1989 Tan-Tar-A, Osage Beach
Missouri Society of Internal Medicine	John Layle, M.D. 212 Medical Plaza 4320 Wornall Rd. Kansas City, MO 64110	Oct. 7-9, 1988 Lodge of the Four Seasons, Lake Ozark
Missouri State Neurosurgical Society	Paul E. Stohr, M.D. 1035 Bellevue Avenue St. Louis, MO 63117	*MSMA Annual Convention, St. Louis
Missouri OB/GYN Society ACOG	George J. Fuchs, M.D. 3401 Berrywood Dr. Suite 201 Columbia, MO 65201	Sept., 1988 Columbia
Missouri Ophthalmological Society	Larry W. Piebenga, M.D. 4400 Broadway Kansas City, MO 64111	Jan. 1989 Capitol Plaza Hotel, Jefferson City
Missouri State Orthopaedic Association	James J. Hamilton, M.D. 2301 Holmes Kansas City, MO 64108	June 1989 Lake Ozark
Missouri Society of Otolaryngology	Edgar Ailor, M.D. Boone Clinic 401 Keene Columbia, MO 65201	Oct. 20-21, 1988 Branson
Missouri Society of Pathologists	Raymond J. Caffrey, M.D. 1509 W. Truman Rd. Independence, MO 64050	*MSMA Annual Convention, St. Louis

Missouri Chapter, American Academy of Pediatrics	Nirmil Mitra, M.D. 11201 Colorado Kansas City, MO 64187	June 1989 Lake Ozark
Missouri Association of Plastic & Reconstructive Surgeons	Richard Heimburger, M.D., 1504 E. Broadway Columbia, MO 65201	*MSMA Annual Convention, St. Louis
Missouri Psychiatric Association	Donald Sanders, M.D. 6400 Prospect, Ste. 312 Kansas City, MO 64132	*MSMA Annual Convention, St. Louis
Central Society of Physical Medicine & Rehabilitation	Clifford Ameduri, M.D. 1965 S. Fremont, Ste. 3600 Springfield, MO 65804	*MSMA Annual Convention, St. Louis
Missouri Radiology Society	David M. Witter, M.D. Dept. of Radiology M201 Hlth. Science Ctr. 1 Hospital Dr. Columbia, MO 65212	*MSMA Annual Convention, St. Louis
Missouri Chapter of American College of Surgeons	Michael Bukstein, M.D. 711 Grand Avenue Hannibal, MO 63401	June 23-25, 1989 Lodge of Four Seasons, Lake Ozark
Missouri State Surgical Society	John B. Buettner, M.D. Dept. of Surgery Barnes Hospital St. Louis, MO 63110	*MSMA Annual Convention, St. Louis
Missouri Thoracic Society	Charles J. Brook, M.D. 6420 Prospect Suite T303 Kansas City, MO 64132	Oct. 1988 Tan-Tar-A, Lake Ozark
Missouri Society of Urologists	Jay L. Milne, M.D. 1900 S. National Suite 2700 Springfield, MO 65804	*MSMA Annual Convention, St. Louis

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Your financial support of the Missouri State Medical Foundation has provided more than $2,400,000 in 2,598 loans to deserving medical students. Physicians throughout the nation thank you for your assistance.

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Letters to the Editor

Special thanks

Dear Dr. Sessions:

I wish to acknowledge and thank the MSMA for sending me the 50-year pin even though I was unable to attend the 130th Annual Convention held in Kansas City. The 50-year pin is a wonderful idea. It gives me a warm feeling inside thinking that the MSMA members honored all of the 50-year members with this recognition.

In June, I wore the pin to my 50th medical reunion for the graduates of the University of Chicago. My classmates agreed with me that this is a distinguished pin.

Again, I thank the entire Association.

Sincerely,
H. Todd Stradford, M.D.
Columbia, MO

A message from MSAA

Dear. Dr. Sessions:

The Missouri State Allergy Association (MSAA) has unanimously endorsed the national statement from the American Academy of Allergy & Immunology regarding the "remote practice of allergy." It is of such vital importance that we want our referring physicians to be aware of this statement.

The remote practice of allergy consists of the forming of clinical judgments and recommending a treatment program, often providing immunotherapy, by a physician who does not have direct contact with the patient.

This practitioner has not personally examined the patient but relies on historical information and test results provided by the personal physician. Patient history information is often mailed on forms to the remote practitioner. In vitro assays of allergen-specific IgE are often performed on serum and mailed in to the remote practitioner.

The hazards to the patient of diagnostic decisions based on indirectly obtained information and therapeutic recommendations based on incomplete or incorrect diagnosis is clearly evident.

The Practice Standards Committee of the American Academy of Allergy and Immunology unequivocally condemns the remote practice of allergy. It states that the "remote evaluation and diagnosis of suspected allergic disease and/or formulation of plans for treatment of the patient's condition, including immunotherapy, is not in the interest of good patient care and should not be used by practitioners of medicine."

With this, your Missouri State Allergy Association heartily concurs and feels that this practice, whether performed by remote labs or local physicians, is not in the best interest of the patient.

Sincerely,
Michael L. Loren, M.D.
President, MSAA
Independence, MO

UMKC thanks MSMA

Dear Dr. Sessions:

On behalf of the School of Medicine and UMKC I want to express thanks for the recent gift from the American Medical Association Education and Research Foundation. The support from you and your colleagues is greatly appreciated.

No doubt you are aware of the rather unique nature of the program at this university's medical school. I continue to be pleased with its success in providing high quality practitioners for the health care needs of the country. Private resources have played a major role in making this possible.

Sincerely,
George A. Russell
Chancellor
Kansas City

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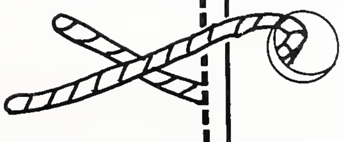

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Metropolitan Specialty Organizations

Listed here are medical specialty groups located in Missouri's metropolitan areas. The listings are organized by city with the name of the current president or contact person, their address and phone number plus the organization's meeting schedule, if available at press time. Please note that any organization not listed below may submit their standard information for publication to: Metropolitan Specialty Organizations, MISSOURI MEDICINE, P.O. Box 1028, Jefferson City, MO 65102.

Columbia

Mid-Missouri Pathology Society
Ann Havey, M.D., *contact person*
Health Sciences Center
Columbia, MO 65212
314/882-8154
Meeting dates to be announced

Jefferson City

Central Missouri Psychiatric Society
Imad Basha, M.D., *president*
University of Missouri School of Medicine
Department of Psychiatry
#3 Hospital Dr.
Columbia, MO 65201
314/882-2511
Next meeting, August 1988

Kansas City

Greater Kansas City Allergy Association
Jay M. Portnoy, M.D., *president*
Children's Mercy Hospital
Allergy & Immunology Division
Kansas City, MO 64108
Meetings are quarterly

Kansas City Society of Anesthesiologists
Richard E. Nelson, M.D., *president*
St. Luke's Hospital, 44th & Wornall Rd.
Kansas City, MO 64111
Meetings are quarterly

Kansas City Dermatologic Society
Lee R. Bittenbender, M.D., *president*
930 Iowa St.
Lawrence, KS 66044
Meetings are monthly on third Thursday, except April, July & December

Kansas City Academy of Family Physicians
William Soper, M.D., *president*
144 Westwoods
Liberty, MO 64068
Meetings are quarterly

Kansas City Gynecological Society
Charles R. King, M.D., *president*
Kansas University Medical Center
39th & Rainbow Blvd.
Kansas City, KS 66103
Meetings are five times a year, usually on third Thursday, January, March, May, September, and November

Greater Kansas City Society of Internists
Melvin Glazer, M.D., *president*
6650 Troost #201
Kansas City, MO 64131
Meetings are quarterly

Great Plains Occupational Medical Association
Andrew McCanse, M.D., *president*
2025 Swift
Kansas City, MO 64116
Meeting dates to be announced

Kansas City Society of Ophthalmology & Otolaryngology
C. W. Norris, M.D., *president*
Kansas University Medical Center
39th & Rainbow Blvd.
Kansas City, KS 66103
Meetings are quarterly

Kansas City Orthopedic Society
Scott Beall, M.D., *president*
1010 Carondelet Dr., #426
Kansas City, MO 64114
Meetings are twice yearly

Kansas City Society of Pathologists
Phillip Munoz, M.D., *president*
Kansas University Medical Center
39th & Rainbow Blvd.
Kansas City, KS 66103
Meetings are monthly on the first Wednesday

Greater Kansas City Pediatric Society
Jerome Grunt, M.D., *president*
Children's Mercy Hospital
24th and Gillham Road
Kansas City, MO 64108
Meetings are monthly on fourth Wednesday except June

Western Missouri Psychiatric Society
J. Richard Harte, M.D., *president*
4400 Broadway
Kansas City, MO 64111
Meetings are quarterly

Greater Kansas City Radiological Society
Barry Cooper, M.D., *president*
North Kansas City Hospital
2800 Hospital Dr.
Kansas City, MO 64116
Meetings are monthly

Kansas City Surgical Society
Keith W. Ashcraft, M.D., *president*
4400 Broadway, #509
Kansas City, MO 64111
Meetings are every other month

Kansas City Urological Society
Charles E. Bare, II, M.D., *president*
8901 W. 74th St., #353
Shawnee Mission, KS 66204
Meeting dates to be announced

St. Louis

St. Louis Society of Anesthesiologists
Robert Feinstein, M.D., *president*
12623 Talow Lane
St. Louis, MO 63146
Meeting dates to be announced

St. Louis Cardiac Club
George Williams, M.D., *president*
10928 Hillcrest Rd.
Kansas City, MO 64134
816/763-2442
Meeting dates to be announced

St. Louis Society of Colon and Rectal Surgery
[illegible] Burns, M.D., *president*
[illegible] Clayton Rd.
St. Louis, MO 63117
Meeting dates to be announced

St. Louis Dermatological Society
Stephen J. Vitale, M.D., *president*
14377 Woodlake Dr., #108
Chesterfield, MO 63107
314/434-8477
Next Meeting, September 1988

The St. Louis Ear, Nose and Throat Club
William Freidman, M.D., *president*
1325 S. Grand Blvd. 2nd Floor
St. Louis, MO 63104
314/768-3222
Meeting dates to be announced

St. Louis Academy of Family Physicians
L. Joseph Kennington, M.D., *president*
14382 Woodlake Dr.
Chesterfield, MO 63107
314/434-3333
Meeting dates to be announced

St. Louis Gastrointestinal Endoscopy Society
Burton A. Shatz, M.D., *president*
10287 Clayton Rd.
St. Louis, MO 63124
314/997-3212
Meeting dates to be announced

St. Louis Gynecological Society
Fernando Arias, M.D., *president*
621 S. New Ballas Rd.
St. Louis, MO 63141
314/569-6880
Next meeting, October 25, 1987

St. Louis Society of Internal Medicine
William A. Peck, M.D., *president*
216 S. Kingshighway
St. Louis, MO 63110
Meeting dates to be announced

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William G. Bowen, M.D., *president*
4652 Maryland Ave.
St. Louis, MO 63108
314/367-3113
Meeting dates to be announced

St. Louis Society of Medical Oncology
Burton M. Needles, M.D., *president*
12255 DePaul Dr.
Ste. 190
Bridgeton, MO 63044
314/355-5597
Meeting dates to be announced

St. Louis Society for Neurological Sciences
James Ferrendelli, M.D., *president*
517 S. Euclid Ave.
St. Louis, MO 63110
314/362-7815
Meeting dates to be announced

St. Louis Ophthalmological Society
Jerome Basinki, M.D., *president*
4900 W. Main St.
Belleville, IL 62223
Meeting dates to be announced

St. Louis Academy of Ophthalmology
Samuel A. Canaan, Jr., M.D., *president*
5505 Delmar Blvd.
St. Louis, MO 63112
314/367-7077
Meeting dates to be announced

St. Louis Orthopedic Society
Lee Skimming, M.D., *president*
621 S. New Ballas, Suite 43
St. Louis, MO 63141
314/872-8015
Meeting dates to be announced

St. Louis Pathological Society
Daniel Santa Cruz, M.D., *president*
615 S. New Ballas Rd.
St. Louis, MO 63141
Meeting dates to be announced

St. Louis Pediatric Society
Warren J. Wimmer, M.D., *president*
3220 Parker Rd.
Florissant, MO 63033
314/921-4500
Meeting dates to be announced

St. Louis Society of Physical Medicine & Rehabilitation
Otakar Machek, M.D., *president*
6744 Clayton Rd., #316
St. Louis, MO 63117
314/645-6606
Meeting dates to be announced

St. Louis Area Society of Plastic Surgeons
William B. Webber, M.D., *president*
6400 Clayton, #110
St. Louis, MO 63117
314/781-2889
Meeting dates to be announced

Eastern Missouri Psychiatric Society
Raj Nakra, M.D., *president*
4949 Barnes Hospital Plaza, 16428
St. Louis, MO 63110
314/367-4500
Next meeting September 19, 1988.

Greater St. Louis Society of Radiologists
Jonathan D. Dehner, M.D., *president*
26 Lorenzo Lane la Due
St. Louis, MO 63124
314/997-4482
Next meeting, September 20, 1988
Thereafter every 3rd Tuesday of the month

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522 N. New Ballas Rd.
#240
St. Louis, MO 63141
314/567-1862
Meeting dates to be announced

St. Louis Surgical Society
Charles B. Anderson, M.D., *president*
6343 Alexander Dr.
St. Louis, MO 63105
314/362-7406
Meeting dates to be announced

St. Louis Thoracic Surgical Society
Donald Judd, M.D., *president*
6125 Clayton Ave., #208
St. Louis, MO 63139
314/649-5525
Meeting dates to be announced

St. Louis Urological Society
Michael J. Chehval, M.D., *president*
621 S. New Ballas Rd., #362
St. Louis, MO 63141
314/991-2626
Meeting dates to be announced

Gateway Vascular Society
Falls B. Hershey, M.D., *president*
621 S. New Ballas Rd., #307
St. Louis, MO 63141
314/567-6666
Next tentative meeting, October 14-15, 1988

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K-DUR™ Microburst Release System™ (potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.
2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.
3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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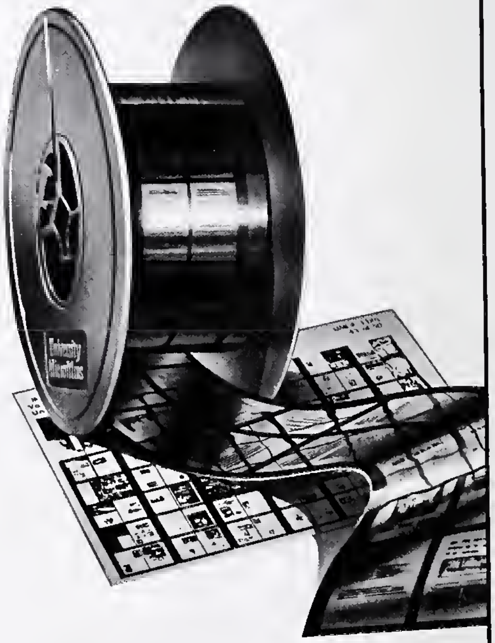

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Medicaid Expands to Cover More Pregnant Women & Children

Robert G. Harmon, M.D.
Director
Missouri Department of Health

Missouri's working poor face serious problems in obtaining adequate health care. They usually earn too much to qualify for public support like Medicaid, but not enough to pay their medical bills. An increasing percentage of these poor families are headed by women, and households with young children in poverty are accounting for a larger and larger percentage of our population. As a result, many children of the working poor face a bleak future due to unresolved health problems.

In 1987, Governor Ashcroft made solving this problem a top priority. The departments of Health and Social Services encouraged the Missouri General Assembly to pass legislation to expand Medicaid coverage. The bill passed and on Jan. 1, 1988, Medicaid coverage was expanded to include pregnant women and children up to 2 years of age in families with incomes of up to 100% of the federal poverty level. Prior to January 1, Missouri Medicaid served only families with incomes of up to approximately 37% of the federal poverty guidelines.

Under the new program, known as "Healthy Beginnings," coverage for children will be expanded annually by increasing the age of children served by one year. In October 1988, children up to age three will be covered. In October 1989, children up to age four will be covered. The full program will be in effect in October 1990 when children up to five years of age will be included.

Families served by this program will include those with inadequate or no employer-sponsored benefits, or which earn too much to qualify for Aid to Families with Dependent Children (AFDC), but not enough to afford adequate medical care or insurance.

For example, a family of three with an income below $775 per month may qualify for these new benefits. If the family income is higher, some work expenses are allowed, so the family may still qualify. Determination of eligibility will be made on a case-by-case basis.

All health care providers should determine whether a pregnant woman or child under 2 years of age is currently Medicaid eligible. When the pregnant woman or child is not eligible for Medicaid, or has not yet made application for Medicaid, and there is a possibility they may qualify under this new program, the provider should refer the individual to the Division of Family Services (DFS) office in the county in which the woman/child lives in order to apply for coverage.

Determination of eligibility will be made by the DFS. Applications are now available at DFS offices. A toll-free number, 1-800-392-1261, has been established to provide more information to potential applicants and health care providers.

For pregnant women who qualify under this new program, medical services covered by the Medicaid Program include prenatal and obstetrical care, and most medical services necessary to maintain the health of the mother and infant during pregnancy and delivery.

Medical services covered for children up to age 2 years include, but are not limited to, Early and Periodic Screening, Diagnosis and Treatment (EPSDT) services; physician services, immunizations, hospital services, drugs on the Medicaid formulary, and specialist services.

A special feature of the Healthy Beginnings program is "case management." This is a system under which responsibility for locating, coordinating, and monitoring a group of services rests with a designated person or organization in order to promote the effective and efficient access to necessary comprehensive services.

Case management services are available to qualifying "at risk" pregnant women and very low birth weight infants (less than 1500 grams) who are eligible under existing as well as under the new expanded Medicaid eligibility program.

Case management services for at risk pregnant women available under this program are intended to reduce infant mortality and low birth weight by encouraging adequate prenatal care and adherence to the recommendations of the provider care. Case management services for children at risk are intended to increase participation in preventive health care and establish a continuum of care for the child.

The risk status of pregnant women will be determined by a risk appraisal. A simple "check off, no postage required" form will be available to physicians for use in determining pregnant women at risk. The form is available upon request and at no charge from the Missouri Department of Health.

The presence of one or more of the following risk criteria will determine a woman to be "at risk" and, therefore, eligible for case management:

1. Age less than 15 years old at time of conception;
2. Mother's education less than 8 years;
3. Gravidity equal to or greater than 7;
4. Smoking equal to or greater than one pack of cigarettes per day; if patient has stopped smoking by the 12th week of gestation, consider as non-smoking;
5. Mother's age greater than or equal to 40 years at time of conception;
6. Prepregnancy weight less than 100 pounds;
7. Previous fetal death;
8. Previous infant death;
9. History of incompetent cervix in current or past pregnancy;
10. History of diabetes mellitus, including gestational diabetes in current or past pregnancy;
11. Multiple fetuses in current pregnancy;
12. Pre-existing hypertension [history of hypertension (140/90 mm Hg or greater) antedating pregnancy or discovery of hypertension (140/90 mm Hg or greater) before the 20th week of pregnancy]; or
13. Pregnancy-induced hypertension in current pregnancy (blood pressure is 140/90 or greater, or there has been an increase of 30 mm HG systolic or 15 mm HG diastolic over baseline values on at least two occasions six or more hours apart).

The Department of Health urges Medicaid and non-Medicaid eligible participating physician providers to administer a risk assessment to each pregnant woman in order to determine if she meets the criteria for case management.

When a Medicaid-eligible pregnant woman qualifies for case management services, based on the application of the risk appraisal form, the provider should briefly explain the availability of case management services and the benefits to the pregnant woman and her unborn child. The provider should encourage the patient to choose a case management provider from the list of Medicaid-approved case management providers and urge her to contact the case management provider's office as soon as possible, in order to initiate the case management services. Names and addresses of Medicaid-approved case management agencies will be published in provider bulletins and also can be obtained from the local DFS office.

All infants covered by Medicaid weighing less than 1500 grams at birth, born after January 1, 1988, will be considered "at risk" and eligible for case management services. The parents/guardians of a very low birth weight child (less than 1500 grams) born after January 1, 1988, should be asked to choose a case management provider prior to the discharge of the child from the hospital. Medicaid participating physicians can be reimbursed for performing risk appraisals.

What can case management do for you? If your "at risk" patients are enrolled, the case manager will track the patients' medical appointments. If the patient misses an appointment, the case manager will contact the patient/parent and assist in scheduling another appointment. The case manager will educate the patient/parent with regards to the risk condition.

Additionally, if you desire, the case manager can provide additional education, such as directions regarding drug therapy, diet, etc. The case manager visits the homes of high risk infants before they are discharged in order to begin educating the parents and assessing the home environment. The case manager also will assist your client/parent with transportation, refer them to childbirth education classes, WIC, and other providers as indicated.

More information on this program may be obtained from the Department of Health, Bureau of Perinatal Health Care at (314)751-6215. ■

MISSOURI PHYSICIANS' HEALTH PROGRAM DIRECTORY

For information concerning the Physicians' Health Program of MSMA or to get help for an impaired colleague, yourself or your spouse, please contact the MSMA Physicians' Health Program Hotline or the contact person in your area. All information and identities will be held in strictest confidence, and the caller need not identify himself or herself.

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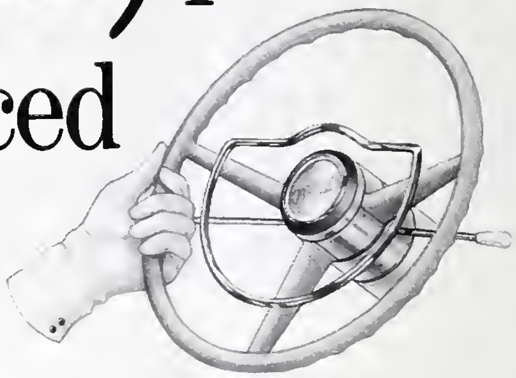
In 1951, power steering was introduced by Chrysler, color made its national debut on television and United Missouri opened its Employee Benefits Division.



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*[illegible]ley A	[illegible]IS METROP.	190
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* Doctor of osteopathy.

ARMY RESERVE MEDICAL PROFILE NO. 5

ROSALYN P. STERLING-SCOTT, M.D.

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

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Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGDT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LO_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

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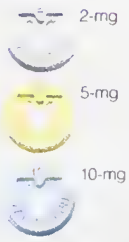
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19-21 **Geriatrics Comes of Age: Patient Management Seminar** — Location: Rock Lane Lodge on Indian Point, Branson, MO. Contact: Janet Perron, University of Kansas Health Education Center, 1500 Henshall Drive, Chanute, KS 66720. 316/431-3050.

26 **2nd Annual Rusk Lectureship in Physical Medicine and Rehabilitation** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

September

1-2 **Respiratory Emergencies: A Multidisciplinary Approach** — Location: Doubletree Hotel, Overland Park, KS. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS 66103. 913/588-4488.

9-10 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis. Contact: Virginia Eason, Cardinal Glennon Children's Hospital, 1465 S. Grand, St. Louis, MO 63104. 314/577-5657.

10-11 **Phacoemulsification Course** — Location: University of Missouri-Kansas City School of Medicine, Kansas City, MO. Contact: Cecilia Corteville, Eye Foundation of Kansas City, P.O. Box 24687, Kansas City, MO 64131. 816/556-3501.

12 **17th Annual Wendell G. Scott Lecture** — Location: Mallinckrodt Institute of Radiology, Washington University School of Medicine, St. Louis. Contact: Ronald G. Evens, M.D., Director, Mallinckrodt Institute of Radiology, 510 S. Kingshighway, St. Louis, MO 63110, 314/362-7100.

14-15 **Endocrine Function and Aging** — Location: Clarion Hotel, St. Louis. Contact: Symposium Secretary, VA Medical Center, GRECC (111G-JB), St. Louis, MO 63125. 314/894-6510.

15-16 **The Second International Vaginal Surgery Conference** — Location: Adam's Mark Hotel, St. Louis, MO. Contact: Pat Daniels, Medical Administrator, St. John's Mercy Medical Center, 621 S. New Ballas, Suite 7011, St. Louis, MO 63141. 314/991-0441.

16-18 **Advanced Trauma Life Support Provider Course** — Location: St. Louis University Medical Center, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

17 **Primary Rheumatology** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

23-24 **Immunology, Rheumatology and Allergy Symposium** — Location: Westin Crown Center, Kansas City, MO. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS. 913/588-4488.

28 **Update for the Primary Care Physician** — Location: Marriott Pavilion Hotel, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

October

1 **Bethesda Eye Institute Contact Lens Update 1988** — Location: Bethesda Eye Institute Auditorium, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

7-9 **Microsurgery of Lumbar & Cervical Spine** — Location: St. Louis University Medical Center, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

13-14 **Skeletal Integrity in the Elderly** — Location: Doubletree at Corporate Woods, Overland Park, KS. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS. 913/588-4488.

14-15 **31st Annual Physicians Alumni Weekend** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

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27-29 **Society of Teachers of Family Medicine, Regional Conference** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

28-29 **Pulmonary Medicine in Primary Care** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

November

3-4 **Pediatric Advanced Cardiac & Trauma Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis. Contact: Virginia Eason, Cardinal Glennon Children's Hospital, 1465 S. Grand, St. Louis, MO 63104. 314/577-5657.

5 **Cardiology Update** — Location: Marriott Pavilion Hotel, St. Louis. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

11-13 **Psychiatry Legal Environment: Medicine's Response** — Location: Hotel DelCoronado, San Diego, CA. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

18-19 **Obstetrics Update 1988** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

December

9-10 **Epilepsy: An Update** — Location: Omni International Hotel, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

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☐ Check made payable to MSMA. Amount $ ______________ ☐ Please bill me.

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In moderate depression and anxiety

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
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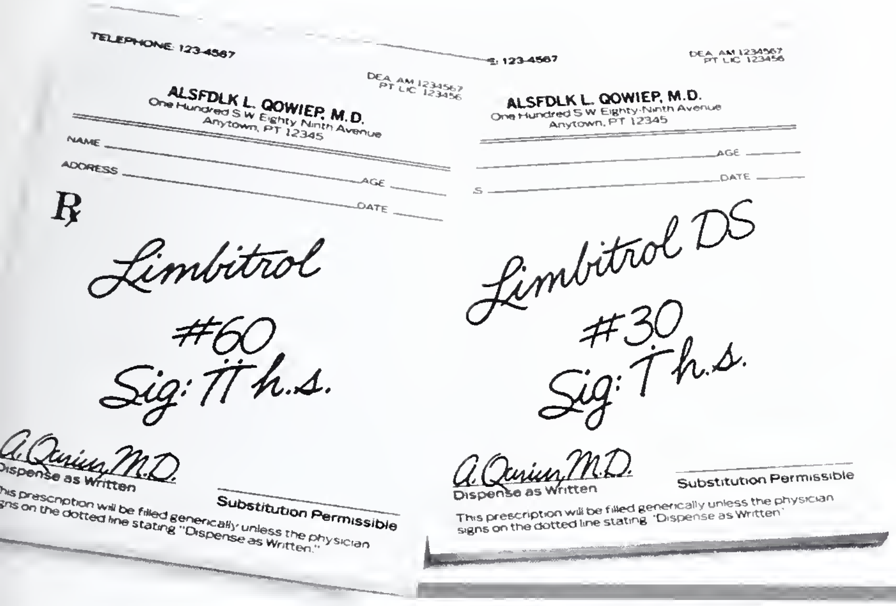
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]



TELEPHONE: 123-4567

DEA AM 1234567
PT LIC 123456

ALSFDLK L. QOWIEP, M.D.
One Hundred S.W. Eighty Ninth Avenue
Anytown, PT 12345

NAME
ADDRESS
AGE
DATE

℞

Limbitrol
#60
Sig: ii h.s.

A. Quinn, M.D.
Dispense as Written
Substitution Permissible

This prescription will be filled generically unless the physician signs on the dotted line stating "Dispense as Written."

123-4567

DEA AM 1234567
PT LIC 123456

ALSFDLK L. QOWIEP, M.D.
One Hundred S.W. Eighty-Ninth Avenue
Anytown, PT 12345

AGE
DATE

Limbitrol DS
#30
Sig: i h.s.

A. Quinn, M.D.
Dispense as Written
Substitution Permissible

This prescription will be filled generically unless the physician signs on the dotted line stating "Dispense as Written"

Protect Your Prescribing Decision: Specify "Do not substitute."

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) (IV)

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) (IV)

References: **1**. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2**. Feighner VP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

Limbitrol® (IV)
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively.
I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

ROCHE

ROCHE PRODUCTS INC.
Manati, Puerto Rico 00701

In the depressed and anxious patient

See Improvement In The First Week[1]...

And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

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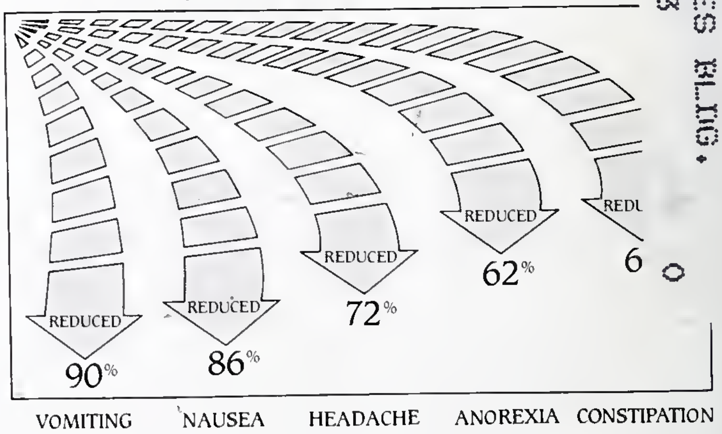
Percentage of Reduction in Individual Somatic Sym
During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

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Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

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Missouri Medicine

Journal of the Missouri State Medical Association

September 1988

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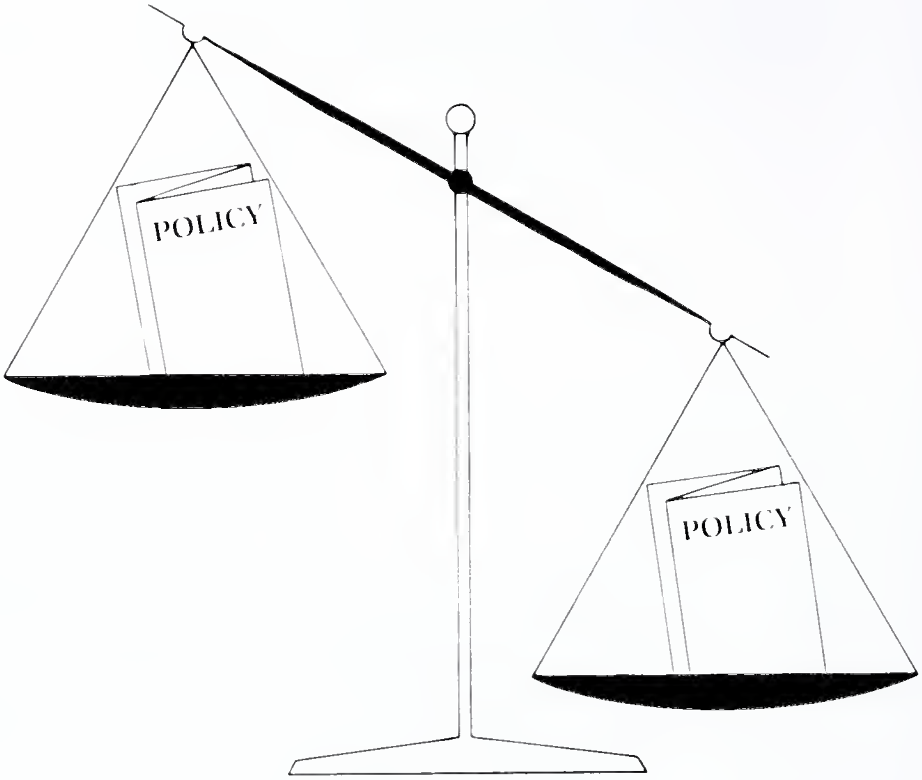
- Emergency Medicine Week, September 18-24
- Difficulties in Emergency Airway Management
- Transtruncal Impalement



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MSMA Progress Notes

MMPAC backs winners

The Missouri Medical Political Action Committee (MMPAC) scored well in the recent Primary Election for State Senate and State Representative Seats.

Approximately 95% of the candidates MMPAC supported in contested primary races emerged as winners. There was only one contested race in the Senate, Sen. Irene Treppler, and she was backed by medicine.

In the Missouri House, there were 38 contests in the primary. Of those, MMPAC contributed to the winning candidate in 36 of the races.

The MMPAC Board of Directors met in late August to analyze the November General Election and decide which candidates warrented medicine's support.

"Our problem," stated Dr. Marvin Singleton, chairman of MMPAC, "is that there were so many important primary contests that it sapped the organization's finances. We drastically need additional funds so that we can assist medicine's friends in the General Election."

Please send your MMPAC contribution today to: MMPAC, P.O. Box 1402, Jefferson City, MO 65102. ■

Medicare workshops successful

"Fantastic! Please consider scheduling this in 1989."

"Entire seminar very informative."

"Good seminar! Would like to attend future ones."

These are just some of the comments echoed by the more than 190 participants at the Conomikes workshop titled "Medicare Update 1988: How to Do It Right." MSMA sponsored the workshops held in St. Louis, Springfield, Kansas City and Columbia the first week of August.

MSMA will sponsor other Conomikes workshops. Contact the MSMA office if there is a topic you would like covered. Past Conomikes workshops have been "How to Run a More Profitable Practice," "How to Improve Third Party Reimbursement and Coding" and "How to Start in Medical Practice." ■

New column begins in October

A new monthly feature is coming to *Missouri Medicine.*

Beginning with the October issue, Jan Woerth, Ph.D., president of J.K. Woerth, Inc., a Kansas City-based health care consulting firm, will be answering questions submitted by readers on issues of medical practice management, third party reimbursement inclusive of questions on ICD-9/CPT coding, practice marketing, patient and employee relations.

Dr. Woerth is a consultant for the Commission on Professional and Hospital Activities (CPHA) and lectures approximately two weeks each month throughout the United States for CPHA on practice management and ICD-9/CPT coding.

In addition, Dr. Woerth consults with private medical practices to help maximize third party reimbursements and improve collections, to enhance patient relations, to market medical services and to solve employee management problems.

Please address your questions for Dr. Woerth to *Missouri Medicine*, P.O. Box 1028, Jefferson City, MO 65102. ■

State CME requirements

The Missouri General Assembly recently passed a law which mandates continuing medical education (CME) effective upon renewal of your Missouri medical license for 1989. The state CME requirements are as follows:

Twenty-five hours of Category I CME must be completed during the 12 months immediately preceding the registration renewal date of February 1, 1989 **or** complete at least 75 hours of Category I CME during the three-year period beginning February 1, 1988-January 31, 1991. Physicians may accumulate 75 hours in one year and none in the other two years.

At this time the State Board of Registration for the Healing Arts will accept your affidavit on the registration renewal form. You need not send certification of CME hours at this point with the renewal application. However, the Board will conduct random audits.

Please note that retired physicians must be 100% retired and requiring no medical licenses to be exempt from the CME requirement. If you are employed by an organization or firm where the practice of medicine is not required but were hired because a medical degree was necessary, then you **are required** to accumulate 75 Category I CME hours by 1991.

Although Missouri physicians may use the Category I hours of the AMA/MSMA Physician's Recognition Award (PRA) as evidence that the CME requirement is being fulfilled, please note that the PRA requires a minimum of 60 Category I hours while the Board requires 75. However, the PRA is an excellent way to document your CME participation.

If you have additional questions regarding CME requirements please contact Ron Ellison, MSMA Director of Scientific Affairs, at 314/636-5151.

Malpractice insurance warning

An unlicensed medical malpractice insurance company continues to sell insurance in Missouri.

Lewis R. Crist, Director of the Missouri Division of Insurance, stated Professional Risk Insurers Management Exclusive Company was asked to discontinue business in Missouri last April. He reported they are still selling insurance and reiterates that anyone purchasing insurance from this company is at risk. Any loss to policyholders resulting from insolvency of the company will not be covered by the Missouri Insurance Guaranty Association.

Crist says the company's financial condition is unknown to the Missouri Division of Insurance because they are not licensed in the state.

MASH unit activating

The Missouri Army National Guard is organizing a mobile army surgical hospital (MASH) at the Richards-Gebaur Air Force Base south of Kansas City. Approximately 250 personnel will be needed to bring the MASH up to 95% of its authorized strength.

To obtain more information, contact Master Sergeant Jack Cisten at 816/922-3211.

PRO update

The Missouri Patient Care Review Foundation, our state's peer review organization (PRO), extends thanks and appreciation to all physicians who donated review time or accepted reduced payment during the past months. The PRO's contract period has been extended by the Health Care Financing Administration (HCFA) to September 30, 1988. Therefore, physician consultant reimbursement will begin on October 1 instead of August 1 as originally planned.

Also, the PRO received word that their contract renewal was accepted by HCFA. The new contract begins October 1, 1988 and will expire on September 30, 1991.

In addition, William D. Bradshaw, PRO president, stepped down as head of the organization on July 31, 1988. The Board of Directors has opened a nationwide search to fill the position.

Prescription Drug Marketing Act

The Prescription Drug Marketing Act becomes effective October 21, 1988. Its main thrust is to establish new requirements affecting the distribution and marketing of prescription drugs. There are provisions that ban the sale, trade or purchase of drug samples and require manufacturers which distribute pharmaceutical samples to follow certain storage, handling and accounting procedures.

Criminal penalties were put into effect on July 22, 1988 for anyone who sells, trades or purchases drug samples. The penalties can be as much as ten years in prison and up to $250,000.

Physicians need to know that:

- The law does not prevent physicians from receiving or dispensing drug samples.
- In order to receive samples, physicians are required to sign a written request form verifying the identity of the drug and the quantity requested. This part of the law becomes effective October 20, 1988.
- Although the law does not require physicians to maintain records, manufacturers may ask physicians for their help in assuring that they did receive the samples requested.

3rd Annual Aging Conference

Join Missouri's health care professionals, senior citizens, service providers and educators at the 1988 Governor's Conference on Aging. The third annual conference is set for September 8-9 at the Adam's Mark Hotel in Kansas City.

For more information call 1-800/235-5503 or 276-1445 in Kansas City.

PBS series explores surgery

NOVA explores the dramatic story behind the rise of modern surgery on *Pioneers of Surgery*, four programs airing on Tuesday, September 6, 13, 20, and 27 at 8 p.m. on PBS (check local listings).

Airing September 6 at 8 p.m. on PBS, "The Brutal Craft," the series premiere, deals with those early days of surgery and the gradual development first of anaesthesia, then antiseptics and later blood transfusions.

On September 13, "Into the Heart" will recount the attempts to operate on the heart.

The replacement of a diseased organ with one transplanted from another human is the subject of the third NOVA program, "New Organs for Old," airing September 20.

The final program in the series, "Beyond the Knife," airs September 27 and looks at some of the excesses of surgery.

MISSOURI PHYSICIANS' HEALTH PROGRAM DIRECTORY

For information concerning the Physicians' Health Program of MSMA or to get help for an impaired colleague, yourself or your spouse, please contact the MSMA Physicians' Health Program Hotline or the contact person in your area. All information and identities will be held in strictest confidence, and the caller need not identify himself or herself.

Jack L. Croughan, M.D., Director, *St. Louis* (Office)	314/725-4004
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Editor's note: *When selecting a guest editor for our special issue on Emergency Medicine (EM), David Trantham, M.D., the EM specialist on the editorial board, assured us that there was only one choice.*

Dr. Ralston R. Hannas Jr. was instrumental in establishing emergency medicine as a specialty. After completing a B.S. in science from Purdue in 1939, Dr. Hannas served as a regular marine officer until 1946 when he resigned as a Lt. Col. to enter medical school. He completed his medical degree at Harvard in 1950, completed an internship and residency at the University of Kansas Medical Center, then spent 12 1/2 years in rural general practice in Sentinel, OK where he established the Stowers-Hannas Hospital and Clinic. Dr. Hannas organized an early emergency medicine residency and served as president of the American College of Emergency Physicians (ACEP) in 1973-74 as well as president of the American Board of Emergency Medicine (ABEM) in 1983-84. He was presented with the Meritorious Service Award by ACEP in 1977. In addition, Dr. Hannas has been active in MSMA and served as an AMA delegate and alternate delegate. He is now retired and lives in Kansas City with his wife, Kay.

Guest Editor

by R. R. Hannas Jr., M.D.

Emergency Medicine has become a vital specialty since its inception in the 60s.

The evolution of emergency medicine

The public often has more sense than it is credited with having.

A prime example is Emergency Medicine, the first specialty forced on medicine by the public. Few remember the bad scenes created when acutely ill or severely injured patients came to hospitals seeking immediate help and found none or substandard care available. Physicians trained to handle the myriad of emergency room problems simply did not exist. Those who could work on emergency patients either were busy with other hospital functions, were at home, or could not be contacted.

Patients waited intolerably long hours or accepted care by students, who were often training in other specialties. Inevitably, patients recognized the shoddy care they were receiving due to these many factors.

Finally, medicine recognized the problem. In 1961, pioneers such as James Mills, M.D., and his group in Alexandria, Virginia, gave up their traditional practices to become full-time, hospital-based emergency physicians. The developing specialty was hard for other physicians to comprehend. Early Emergency Medicine did not provide continuity of care which heretofore had been a hallmark of any medical practice. Furthermore, the specialty attracted many floaters in medicine who, for one reason or another, were dissatisfied with their current work. They just *knew* that Emergency Medicine was for them. I could write a book about the transients we utilized in the beginning because no one else was available early-on. In fact, some of these characters would disappear into the woodwork when a true emergency arrived!

In 1968 John Wiegenstein, M.D., gathered up the loose ends and tied us all together in a national organization — the American College of Emergency Physicians (ACEP). Not surprisingly, the initial group stimulus was economics — obtaining recognition by the Blues in Michigan. ACEP has been the catalyst for the specialty's development through the recognized steps — definition of content, residency training programs, medical school adaptations, setting standards, establishing the Board, developing continuing medical education, and research in the specialty.

The American Board of Emergency Medicine (ABEM) was established in 1976 and approved by the other specialties American Board of Medical Specialties (ABMS) in 1979. The first examinations for certification, written (Part I) and oral (Part II), were held in 1980, and several thousand physicians have been certified. A practice-eligible track and a residency-eligible track have been available but after this year only E.M. residency-trained physicians will be eligible to take the exams. There has been no grandfathering by the ABEM.

There are many challenges ahead for Emergency Medicine. We cannot demand respect; we must earn it. Our patient care must continue to improve, and it will as our relatively-young residency graduates gain the maturity that only comes with

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Guest Editorial

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experience. The lifetime of learning that medicine provides will be a constant stimulus. It is my hope that we will abandon our long (12 hours or more) shifts and work no more than eight hours at a time. Mistakes are more likely with fatigue, and fatigue also contributes to hostility towards patients and our supporting staffs.

Community participation must develop. Professionally we are involved in the Emergency Medical Systems through paramedics, ambulances (ground and air), and public education. We need to go beyond this and participate in community institutions such as government, schools, churches, and recreation. This will come with family development and provide our members more time away from the hospital emergency department.

Our emergency physicians must participate in hospital staff functions and assume responsibilities on committees, education programs, and in staff leadership. When one of the emergency physicians is president of the hospital medical staff then the coming-of-age process will be apparent.

Many emergency physicians are devoting more time to the specialty at its local, state, and national levels, but what is most needed now is for all emergency physicians to become involved in organized medicine — county medical societies, state medical associations, and the AMA. When Emergency Medicine has delegates to the AMA House of Delegates in addition to the one allotted ACEP delegate, we will be making progress. Family Practice usually has about 30 such delegates among the state medical association delegates — a challenge! We pay our dues to organized medicine in more than just dollars. It takes many hours of time and much effort, and the rewards will be worthwhile. We cannot gripe about the system if we don't participate.

Though the public and the rest of medicine should not confuse ambulatory care centers with emergency medicine, we should all be open to changes in function patterns that are resulting from socio-economic changes, no matter from where the stimulus comes.

In every rewards system there are basic elements — pay, personal satisfaction, and status, not necessarily in that order. The Greeks would say this should be an equilateral triangle, and Americans would say it should be a large triangle. Emergency physicians will always have an adequate rewards system if we provide improved patient care and contribute to our communities and organized medicine.

One final note. September 18-24 is Emergency Medicine Week. This issue of *Missouri Medicine* will expose you to some of the concerns in our young specialty. We thank the Editorial Board of *Missouri Medicine* for asking us to share our insights with you. Special thanks to EM reviewer David Trantham, M.D. of Cape Girardeau for coordinating this issue and to our manuscript author, John Bennett, M.D. of Kansas City.

As you read this journal, remember that we emergency physicians are proud of our medical field. We hope our involvement and membership in organized medicine will increase as our specialty matures. To date, 49 of us are members of MSMA although 200 belong to Missouri ACEP.

However, one thing is certain. Through opportunities such as the September issue of *Missouri Medicine,* we MSMA and ACEP members can learn together through sharing our concerns in the practice of medicine. ■

Emergency Medicine: A Unique Specialty

In a medical emergency, every second is precious, every decision critical.

No one knows this better than emergency physicians. Day or night, every day, they must deliver the best care possible — often under difficult conditions. Time for lengthy discussion of possibilities, protracted consultation with colleagues, comprehensive diagnostic testing — is a luxury emergency physicians rarely can afford.

It takes a special kind of person to rise above this pressure and still deliver excellent health care. Emergency physicians are special people — specially trained and specially motivated.

Emergency physicians are trained to expect the unexpected — any illness, any injury, any number of patients. Yet no matter what the problem, each patient receives special care by an expert who has chosen a career in giving the kind of care that really counts, when it counts.

From the ACEP fact sheet.

MACEP President's Page

by M. L. Weaver, M.D., FACEP
President, MACEP

Initially perceived as an "understudy" on the health care stage, the expectations and commitment of career emergency physicians has drastically changed.

Setting the stage for emergency medicine

The curtain on the emergency health care stage in Missouri rolled up in 1973, concurrent with the passage of the Federal Emergency Medical Services Act. A small group of approximately five visionary physicians founded the Missouri Chapter of the American College of Emergency Physicians (MACEP) and elected Dr. J. Coleberd as the organization's first president. Since that time, our chapter, like our specialty, has experienced unprecedented growth.

In 1973 we were fortunate to have Dr. R. R. Hannas serving as national president for ACEP. Since that time members from across the state have occupied seats on the American Board of Emergency Medicine, the Governor's Advisory Council on Emergency Medical Services, national/local editorial boards and participated as national board examiners. Some have traveled as far as Afghanistan to provide emergency care, and to China to provide educational exchange.

The spotlight began to shine on MACEP to take a lead in upgrading standards for emergency health care. Brought to this stage were the Missouri State Medical Association, the Missouri Association of Osteopathic Physicians & Surgeons, the Missouri Hospital Association, the Missouri Ambulance Association, the Missouri Emergency Nurse Association, the Missouri Paramedic/EMT Association and the Missouri Flight Nurse Association to appropriately choreograph our patient care performance. The success behind Senate Bill 31/29, the establishment of air ambulance regulations, recommended pre-hospital treatment guidelines, and the recently-held combined conference between these emergency organizations attests to their dedication in the future of Missouri emergency medical services. In no other specialty is high-quality care so depended upon, yet so dependent on the efficient coordination between multiple professionals and high-tech equipment.

Initially perceived as an "understudy" on the health care stage (with limited ongoing responsibilities), the expectations and commitment of career emergency physicians has drastically changed. To the hospital, we are their extension into the community; to the private doctor, we are his silent partner; to the pre-hospital care personnel, we are their educators; and to the public, we are the only specialty in medicine that is immediately available for their health care needs. Now, career emergency physicians spend many hours teaching Advanced Cardiac Life Support, Advanced Trauma Life Support, Basic Trauma Life Support, Pre-Hospital Trauma Life Support, Pediatric Advanced Life Support and radio/telemetry courses. We have extensive emergency department peer review which requires auditing of more than 20 different quality assurance

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MACEP President's Page

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indicators on each emergency department chart. We review hospital resuscitations/equipment, the appropriateness of flight nurse/paramedic care, review disaster plans, and testify in sexual assault/child abuse cases. These many "off-line" activities sometimes exceed the "on-line" challenge of simultaneously running a helicopter cardiac arrest code, treating a violent PCP overdose, and writing "holding orders" on a patient whose current number of medications is exceeded only by his past number of hospital admissions. Truly our scope of practice has evolved from the "emergency room docs" to emergency medicine specialists.

As we mature, we face complex issues of increasing personal health risk, temporary emergency department closings, and inadequate trauma system funding. We hope, with continued support from the MSMA, the lights on the Missouri emergency health care stage will shine on an encore performance of which we can all be proud! ■

Emergency Medicine Profile

	National[1]	Missouri[2]
I. Number of Emergency Physicians (approximate)	23,000	400
a) members of American College of Emergency Physicians (ACEP)	11,903	200
b) Diplomates of the American Board of Emergency Medicine (ABEM)	6,211	48
II. EM Residency Programs	73	2
a) residency graduates	2,393	86
b) average annual graduates (approximate)	430	7
c) current residents in training (approximate)	1,250	23
III. Number of emergency nurses (approximate)	75,000	1,141
a) members of the Emergency Nurses Association (ENA)	16,000	314
b) emergency nurses certified by the ENA	16,159	255
IV. Number of Emergency Medical Technicians	483,468*	2,590**
V. Number of Paramedics	41,327*	1,658**
VI. Number of Hospital-based Emergency Departments (approximate)	5,808	168
VII. Visits per year	82,117,221	1,671,703
VIII. Hospital Helicopter Services	160	8

*Trained **licensed

1. *Emergency Medical Services,* 1988 Buyer's Guide.
2. The Missouri Bureau of Emergency Medical Services (approximate).

"Without your help I simply could not have made it through medical school."

The Missouri State Medical Foundation — MSMF — was created by the Missouri State Medical Association for the express purpose of giving financial assistance to deserving young Missourians who will be tomorrow's doctors.

Send your check today to the Missouri State Medical Foundation, 113 Madison St., P.O. Box 1028, Jefferson City, MO 65101.

EDITOR'S DESK

by Ramona M.
Chapman, M.D.
Associate Editor

Today's EM physician uses expert on-the-spot analysis to save trauma patients.

Salute to Emergency Medicine physicians

It's 1 a.m. The phone rings; a sleepy voice answers, "Hello." At the other end of the line an alert voice replies, "Dr. Jones, this is Nancy at the emergency room. Mrs. Alice Jennings, a 76-year-old woman who says she's your patient, has come into the emergency room complaining of diarrhea, nausea and weakness."

Mrs. Jennings, the tired doctor reflects, the fragile elderly lady he just saw a couple of weeks ago. "Ask the EM doctor to evaluate her please. Tell him she's taking Motrin for arthritis." "Yes, Dr. Jones. Shall we call you back?" "Please."

The phone sounds again. Dr. Jones opens one eye to note the time as he picks up the receiver. 3:30 a.m. "Hello." "Dr. Jones, this is Nancy at the ER. Please hold one moment for Dr. George."

"Hello John, this is Julie. I've evaluated your patient Mrs. Alice Jennings. She's a 76-year-old woman with arthritis who's been taking Motrin four times a day. She states she has no allergies. She came in tonight complaining of nausea, vomiting and diarrhea. She complains she's so weak she can only walk with help. She also complains of feeling hot and sweaty and has had frequency and dysuria for two days. Her BP is 110/60 lying, 90/50 sitting, P 104, T 101.4, R 20. She's a bit on the dry side and says she's had diarrhea four times in the last three hours. There's no CVA tenderness. Her UA shows 3+ bacteria, 10-20 wbc/hpf, 2-4 rbc/hpf, positive nitrite, specific gravity 1.024; the astra profile is OK except the sodium is 130 mEq/l, potassium 3.3 mEq/l; CBC shows wbc 11,300 with 71% segs, 10% bands, 17% lymphs, 2% monos and the urine has been sent for C&S; the EKG is normal. I think probably we should put her on the antibiotic you prefer for her UTI and give her some fluids on an STO basis and you can evaluate her for admission or dismissal in the morning."

"Thanks, Julie. Please start her on Ampicillin 500 mg IV q 6 h and hang 1000 cc NS plus 40 mEq KCl at 80 cc/h."

"OK, John. I'll just write some holding orders until you can see her tomorrow."

Dr. John Jones was on call for his associate and himself. Four times that night patients had come into the ER requesting his services. One was a patient who'd fallen and broken an arm; one had chest pains, another had a laceration requiring sutures. Julie George, M.D., the EM physician, had seen them all, done a brisk evaluation, then checked with him to see if he had any other thoughts or instructions on the case. Without her expert on-the-spot analysis, Dr. John Jones would have had to field numerous inquiries, go into the ER himself at least twice and

Continued on page 584

Editor's Desk

Continued from page 583

lose at least three hours of sleep. With the EM physician's help, he had been able to deliver adequate around-the-clock care to his patients and get enough sleep to be alert for the next day's work. Thus he and all the other patients he would care for that day had benefitted from Dr. George's expertise.

Major trauma, code blue, acute M-I, shock, sore throats, anxiety reactions, infections, and on and on. Today's EM specialty physician is trained to deal with them all. Their skill has given emergency room care a new meaning, even in the remotest community hospital.

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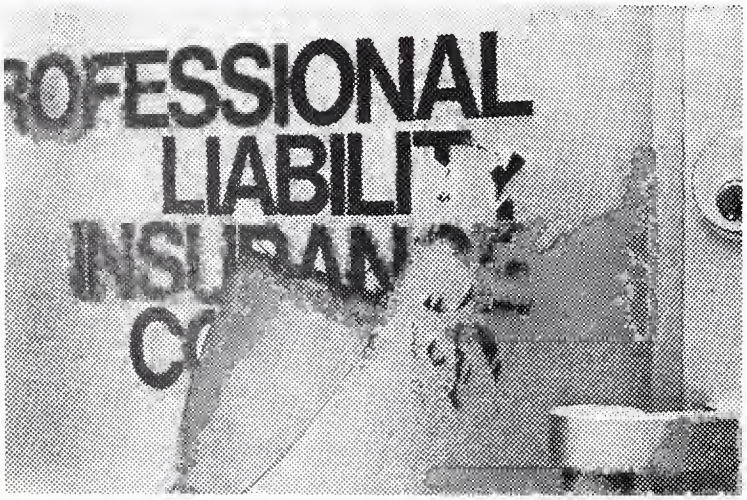

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PRESIDENT'S PAGE

by T. J. Cooper, M.D.

The poor are always with us but now we have a crisis.

Helping the underinsured

Few indeed elect to be poor. It is not a desirable state of life. Many are impoverished by poor health, by the viscissitudes of fate, by their environment and by the place into which they are born. Some are never exposed to the work ethic that most must have in order to receive a regular paycheck. There is no family or peer pressure to consistently arrive on time and turn out a day's work for a day's pay. A few are just plain unlucky.

This is a societal problem, and as we all know, not easily resolved. We as a society have professed the obligation to provide medical care to the poor and disadvantaged. Medicaid was instituted for that purpose. However, in Missouri citizens prefer low taxation (we rank 49th in state and local taxes; 43rd in personal property taxes), so the Medicaid program is chronically underfunded. In 1986, physician payments from Medicaid represented 9.6% of the total amount spent for the Medicaid program. This comes out to be 28 cents on the dollar for billed charges.

The MedAssist proposal, if passed in November, will provide an additional $250,000,000 per year. This will increase the average Medicaid payment for physician services by 77%. The MedAssist program will also help those unfortunate enough to be in the position of having some income but not enough to purchase their own medical insurance. The Missouri Hospital Association estimates that the hospitals provided $278,000,000 in uncompensated care during 1987 while Missouri's physicians provided $139,000,000. MedAssist will help with that burden.

Another effort on the part of physicians will benefit the elderly poor. It calls for the physicians to accept the Medicare payment plus deductibles as payment in full for those individuals whose income is 150% or less of the poverty level. An estimated 400,000 Missourians are in this position. Another 250,000 elderly have incomes in excess of this amount, and can be expected to help pay their own way. Having lived three score and five years should not automatically entitle one to a free ride at the expense of generations to come. But fate can be cruel, and no one can predict their status in the future.

So, the poor shall always be with us, and as physicians, we have the opportunity to alleviate some of the concerns. We also have the obligation. ■

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Auxiliary Message

by Carol Sparkman
1st Vice President-Membership
MSMA Auxiliary

> *Learning about the Auxiliary, its aims and hopes, makes a new member realize there is such a thing as "belonging" over and above "joining."*

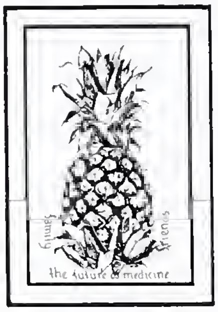
We're stronger together

The American Medical Association Auxiliary, founded in 1922, is a nationwide, volunteer organization of 80,000 physicians' spouses dedicated to helping people achieve and maintain healthy lifestyles.

Membership is vital to our organization's activities and success. Through a federated structure of county, state, and national organizations, the AMA Auxiliary pursues its goals of protecting and improving public health and assisting physicians in providing quality medical care. It is through increasing our membership that we have the opportunity to help shape the future of medicine. Without each and every member, we are unable to grow, stay involved, and see our projects and efforts flourish. There is strength in numbers, and with greater numbers, we can accomplish great things.

Missouri has always held strong and continued to provide its Auxilians with information for quality health projects, legislative involvement, and fund raising activities. We must continue our efforts to move ahead in each area. We can and must offer greater influence in all these areas and make an impact upon the delivery of health care and health education in our communities, and promote a positive image for medicine. If that sounds like a tall order, it is! Membership is the life-blood of an organization. Each Auxiliary member is a representative and spokesperson for the medical profession as well as the Auxiliary.

As we begin our membership efforts this year, our focus or theme concentrates on our family, our friends and the future of medicine, as depicted by the various parts of a pineapple.



As we look at the three parts of the pineapple, may we think in terms of our membership and the benefits that we derive from this association. As the **flower** represents growth or something new — may we be reminded of our part in the future of medicine. We must become active and support our one and only philanthropic endeavor, that being AMA-ERF. Fundraising for the American Medical Association Education and Research Foundation ensures quality in education and school facilities for our medical students.

May the **body** of the pineapple remind us of the friends that we have both within and outside the medical community. The Auxiliary provides a support system for our families through service and fellowship. We are a network of medical families united by a common bond for a common goal: to improve the health and quality of life for all people. Lasting friendships have evolved in many states and

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Auxiliary Message

Continued from page 587

across the nation as a result of our participation in the Auxiliary.

May the **base** of the pineapple remind us of our family and the security that we have in our own family unit and our medical family. This is our origin and influences our potential growth. May we always display a willingness to give of ourselves to our families and to others as needs arise whether it be at home, church or the community. Join the Auxiliary where your membership and active participation help sustain a strong and vital organization. We're stronger together.

As a **physician,** please tell your spouse about us and encourage them to become a member of the Auxiliary. If there is no organized Auxiliary in your area, we still need each member-at-large to participate. In an organized Auxiliary area, each spouse can make direct contact through an Auxiliary member or county officer to initiate or renew a membership or complete and return the form below. The appropriate county, state and national information will be sent back promptly.

Learning about the Auxiliary, its aims and hopes, makes a new member realize there is such a thing as *"belonging"* over and above *"joining."*

Please encourage your spouse to become a member of the Auxiliary and assist in those programs that improve the health and quality of life for all people. We really can do more together. ■

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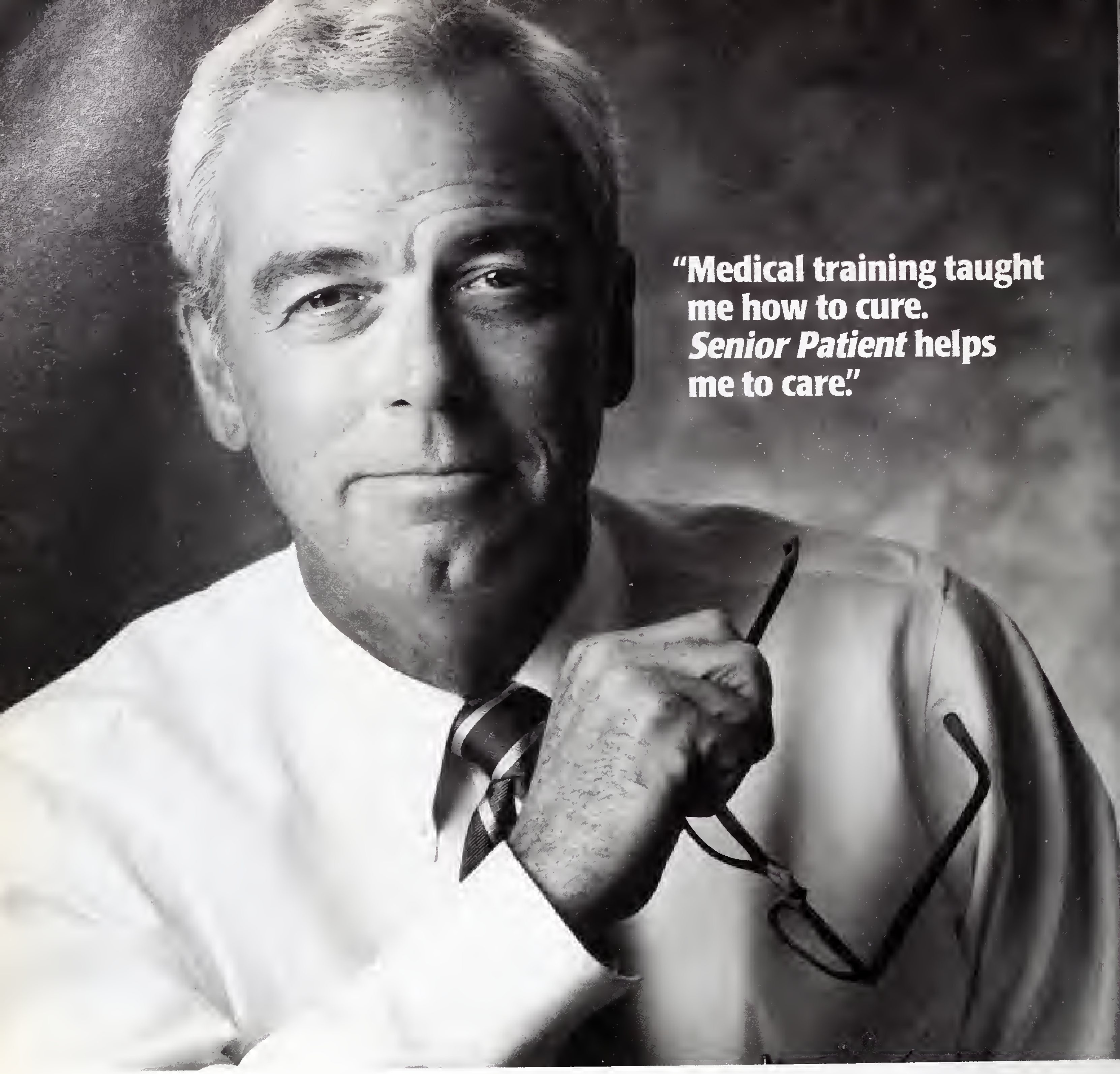
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Difficulties in Emergency Airway Management

John R. Bennett, M.D.
Kansas City, Missouri

Establishing and maintaining an adequate airway in the victim of trauma is the primary concern for everyone who may be involved in resuscitations and rescues. However, accomplishing the task is not always straightforward. The many considerations in gaining an airway are presented and discussed.

The primary importance of the airway in both medical[1] and surgical[2] resuscitations is now generally appreciated. Mnemonics such as the A.B.C.'s* of Basic Life Support (BLS) course and the A.B.C.D.E.'s** of the Advanced Trauma Life Support (ATLS) course have done much to further the precept of a mandatory securing of the airway prior to any other therapeutic intervention. It is now the rare physician or nurse who has not spent hours practicing mock resuscitation on the plastic airways of training mannequins, intubating over and over again the changeless and widely patent "vocal cords" of a Resusci-Annie or one of her relatives. While this training is all to the good, the mnemonic/algorithm/mannequin manner in which most health care providers first learn airway management may give the erroneous impression that the emergency airway is something of a "given" in resuscitation, an invariably straightforward — tending toward easy — aspect of the total resuscitation effort. It is the purpose of this article to discuss the management of certain airway complications that do not occur in training mannequins but do occur with some frequency in the emergency department and for which there are many, albeit imperfect, emergency solutions.

The Airway as Taught by BLS

Basic Life Support (BLS) is familiar to most health care professionals.[3] The great value of the mnemonic approach to instruction is the establishment of organization in what are often otherwise chaotic resuscitation settings. This is particularly true in layperson or "first responder" resuscitations. Rational therapy dictates oxygenation of the central circulation before any attempt to augment mechanical flow. It is also true that many "arrested" patients will improve dramatically after simple attention to airway patency; thus the sequential or graduated response to BLS is appropriate.

Over the years several techniques for opening the airway have been advocated. Presently, the American Heart Association endorses the so-called head tilt-chin lift maneuver as most effective.[4] This maneuver is accomplished by placing one hand on the victim's forehead and applying a firm, backward pressure with the palm to tilt the head posteriorly, then placing the fingers of the opposite hand under the victim's anterior mandible to bring the chin forward. The principal disadvantage of the head tilt-chin lift maneuver is the degree to which the victim's cervical spine is extended in opening the airway. If there is known cervical spine instability or the clear potential for it (e.g. the resuscitation of the apneic victim of a diving accident), rescuers should employ the so-called jaw thrust technique. Here the victim's jaw is lifted anteriorly by means of a steady bilteral force applied to the mandibular angles, lifting the occluding jaw and tongue without hyperextending the neck.[5]

---

* *Airway, breathing, and circulation.*
** *Airway, breathing, circulation, determination of neurologic injury, and exposure of the body for complete examination.*

Whatever the technique used, the sine qua non of an adequate BLS airway is the relatively silent rise and fall of the chest with attempted ventilation. In other words, a trial of ventilation defines the adequacy of the airway. This is an important point because many rescuers, particularly laypersons, continue to slavishly perform one of the BLS airway techniques even when things are *functionally* going poorly. Airway inadequacy reveals itself by little or no objective chest rise and the presence of stridor, honking, whistling, or — to speak less delicately but more accurately — flatulent noises. Teachers of BLS should probably give greater emphasis to the functional or "airway-defined-by-breathing" concept.

Another major difficulty with the implementation of BLS is the ubiquity of the bag-valve mask. This is probably another case of technology outstripping education: It is very difficult to learn to use a bag-valve mask correctly. And once one learns the technique, it takes considerable practice to maintain the skill.[6] Many BLS rescuers would possibly be better advised to use the simpler mouth-to-mouth or mouth-to-mask techniques.[7] Here again BLS educators need to emphasize function in the technique and strongly discourage the all-too-common ritual of resuscitation with ineffective mask seal, hissing air leaks and abysmal tidal volumes.

A final issue in mouth-to-mouth ventilation is prevention of disease transmission. While any number of diseases give cause for theoretical concern, the clear modern worry is for hepatitis B and HIV exposures. To date, there has been no documented transmission, through CPR, of either of these viruses; however, the known shedding of both viruses in saliva and blood makes some form of interposed barrier necessary in mouth-to-mouth ventilation. This is presently the view of the Centers for Disease Control and will likely remain so until more is known concerning the true risks involved.[8] As noted, in hospital settings, bag-mask devices abound, but for physicians and others in the out-of-hospital or "first responder" scenario, "interposed barrier" practically means the carrying of a collapsible "pocket mask." This is admittedly cumbersome, but if the important traditions of altruism and leadership of physicians are to be preserved, something like this will almost certainly be needed. It surely behooves every health care professional at least to consider the matter before being faced with the actual decision.

The Airway as Taught by Advanced Life Support

However good the BLS airway, it must be regarded as simply a "bridge" to one of the more definitive airways of advanced life support.[9] A major reason for this is the gastric distension and greater risk of aspiration associated with the airway in BLS. Any safe, long-term airway should effect relative isolation of the airway from the pharynx and gastrointestinal system. Importantly, endotracheal intubation or any of the other airway approaches in Advanced Life Support (ALS) do not confer any absolute protection against aspiration,[10, 11] though many health care providers have become fairly cavalier in this regard. No ALS airway is adequate to ensure against aspiration of standing secretions. When there is blood, vomitus, or other secretions pooled in the hypopharynx, even in the endotracheally intubated patient, the patient should be aggressively turned to one side and the secretions suctioned. The so-called Sellick maneuver (manual cricoid pressure in an effort to occlude the esophagus and prevent aspiration) has been similarly misunderstood. The Sellick maneuver is more a technique for limiting passive regurgitation or reflux from the esophagus. There are specific dangers inherent to applying the maneuver in cases of active emesis.[13]

Having emphasized aspiration as the limitation common to all ALS airways, each of the specific intubation techniques will be discussed. Essentially, these are the esophageal isolation technologies, the various endotracheal airways, and the surgical airways.

Esophageal Isolation Airways

Developed in the late 1970s, the esophageal obturator airway (EOA) takes advantage of the natural tendency for tubes blindly passed into the hypopharynx to preferentially pass into the esophagus.[14] Once the esophagus is intubated, a relatively large (30 ml) occluding balloon is inflated and a modified bag mask is sealed about the face and protruding esophageal tube. This effects a relative isolation of the airway from the GI system. Very little skill is involved in this technique, and its only immediate complication is accidental endotracheal intubation. This is evidenced by the absence of breath sounds once ventilation is attempted. Studies have demonstrated the ventilatory equivalency of the EOA to endotracheal intubation. In cases where an oxygen-powered breathing device has been used, equivalency has been shown. Later modifications of the EOA have permitted decompression of the stomach concomitant with ventilation, using the esophageal gastric tube airway (EGTA),[15] and the pharyngotracheal lumen (PTL) airway, in which there is not only an occluding esophageal tube but also a much larger occluding pharyngeal balloon.[16] This has the advantage of limiting dead space, making ventilation of the trachea more direct. Esophageal isolation technologies are rapid and require very little motion of the cervical spine. All of the esophageal airways are placed blindly: If one were going to visualize the airway, he might as well accomplish the preferred endotracheal intubation. Esophageal approaches are specifically *not* applicable to awake or spontaneously breathing patients or to children under the age of 16. These approaches, like the BLS airway, are best seen as a temporary measure, especially useful in the prehospital setting and subject to replacement by another airway method once that equipment and expertise are available.[3]

Endotracheal Intubation

Like the EOA, endotracheal tubes may be passed "blindly," but this is usually done in a spontaneously breathing patient. Both to minimize gagging as well as to lend greater laryngeal direction to the tube, blind endotracheal intubations are usually performed via a nasal approach. Because the respiration noises transmitted up the tube provide clues as to the tube's location, nasotracheal intubation cannot be considered truly blind. The skill required for successful nasotracheal intubation is also far greater than that for the esophageal techniques.[17] Theoretically at least, very little neck motion is required for the nasotracheal approach and thus, along with the other blind techniques, it has been advocated for use in cases of known or potential injury to the cervical spine. In fact, the degree to which the neck is moved in the nasotracheal method probably varies widely. Nasal or oral endotracheal intubation over a flexible bronchoscope has also been described, though this approach is clearly limited to settings in which bronchoscopy is available and there are individuals trained in the technique.[18]

Through the various advanced life support courses, intubation of the trachea under direct vision (orotracheal intubation) has become a skill more widely performed by practicing physicians. It is no doubt the most common of the ALS airways. Endotracheal intubation has also been described in the supine patient, under direct visualization, in sitting patients,[19] and by a tactile approach.[20] All of these are techniques more appropriate to demonstration than to written description. As will be noted, endotracheal intubation is best suited to highly obtunded, sedated, or paralyzed patients, and even in these settings the risk of vomiting with aspiration is present. Another limitation of the method is the significant motion of the cervical spine (especially the upper cervical spine) that it requires. This too will be discussed further.

An interesting chimera of the endotracheal and surgical airway approaches is that of intubation orally over a catheter introduced into the airway by percutaneous puncture of the cricothyroid membrane. This guiding catheter is advanced cephalad out the mouth and an endotracheal tube is threaded over the catheter and into the larynx. The catheter is then removed and the endotracheal tube advanced farther into the trachea. Like the nasotracheal technique, this method requires less movement of the patient's neck, but may be performed on apneic patients.[21]

Surgical Airways

Surgical airways include various punctures and incisions made over the anterior neck, intercepting the airway at either the cricothyroid membrane or the proximal trachea. For many years, the tracheostomy was the preferred emergency surgical approach; in the past 10 years opinion has changed in favor of the cricothyroidotomy. Cricothyroidotomies may generally be effected much quicker and with less attendant bleeding than can emergency tracheostomies.[22] This is particularly true in ventilation via trans-cricothyroid catheter.[23] In this technique, after a brief skin preparation, a large bore intravenous catheter (12 to 14) is inserted into the cricothyroid membrane and air is aspirated to confirm placement in the proximal airway. The Teflon catheter is then advanced over the needle and the patient ventilated with any of several high flow sources. Jet ventilators generate better flow rates, but simple emergency department wall oxygen sources have also been reported to be adequate. Ventilation with wall oxygen involves alternating active insufflation with passive exhalation via a "Y" connector or similar blow-by device.

Despite the relative ease of insertion, needle cricothyroid airways should not be viewed as a long-term airway solution. Poor tidal volumes have been reported, and there is not even a minimal sealing of the airway against aspiration. Physicians should use needle cricothyroidotomy temporarily and then proceed either to endotracheal intubation or a formal cricothyroidotomy.[24]

Three Categories of Difficult Airway Management

Whereas a number of conditions conspire to make emergency airway management difficult, most airway complications fall into one of three broad categories. These categories are:

1. The patient whose airway cannot be visualized or through which an artificial airway cannot be passed.
2. Intubations of the awake and resisting patient.
3. Intubations of patients in which there are known or suspected cervical spine injuries.

The challenge to the physician is to choose intelligently from the available methods to effect the best result.

The Obscured or Obstructed Airway

Abnormal neck or oropharyngeal anatomy, blood, vomitus or other foreign material in the oropharynx-glottis, or abnormalities of the glottis itself (e.g., epiglottitis, laryngospasm) are examples of the obscured or obstructed airway. Sometimes the solution is to temporize with a BLS airway approach pending the arrival of a more experienced laryngoscopist, as in the case of abnormal neck or oropharyngeal anatomy. On the other hand, trauma with fractures or transections of the airway or massive bleeding are examples of situations against which no amount of laryngoscopic expertise may prevail. In these settings, as well as in the case of a completely obstructed airway (one not responsive to the BLS protocol for the choking victim), it is necessary to act quickly to establish an airway below the level of the obstruction or obscuration. This is usually by means of a surgical airway, either a cricothyroid puncture or formal cricothyroidotomy. While surgical approaches to the airway should not be undertaken lightly, physician hesitation when such an airway is indicated is a common prelude to patient deterioration. The physician should question whether he is able to ventilate the patient *around* the problem by means of a BLS technique. Poor mask seal due to massive facial trauma, gurgling of major upper airway hemorrhage, and inadequate chest rise with stridor around a foreign body are some reasons a BLS technique would not be appropriate. Similarly, esophageal airways are rarely useful in these settings. Once BLS methods have failed, and one or more of the methods of endotracheal intubation has either failed or is obviously inappropriate, the need for a surgical airway is clear. The only remaining consideration then becomes the placement of this surgical airway below the level of the obstruction. Again, a cricothyroid airway usually accomplishes this, but there remain indications for emergency tracheostomy.[25]

Intubation of the Awake Patient

For many physicians the term "awake intubation" seems an oxymoron. There are, however, many situations in which an awake and even combative patient is in need of airway control. A good example of this would be the patient with acute respiratory distress — for whatever reason — with physical examination evidence or laboratory evidence of serious decompensation. Waiting for these patients' impending deterioration to facilitate conventional endotracheal intubation is not an option. Similarly, the intoxicated patient who requires ventilatory support or airway protection (as before gastric lavage) may require awake intubation.

There are three general approaches to such patients. The first of these is blind nasotracheal intubation. As noted, this approach requires the patient to be making some ventilatory effort and unless intubation is accomplished rapidly on the first attempt, the physician must be vigilant for further patient deterioration during the procedure, and opt for some other method. In expert hands, blind nasotracheal intubation is successful in a high percentage of these patients. The second intubation option in awake patients is sedation complementing orotracheal intubation. While this also seems anathema on first consideration, it is often successful. The usual sedative agents used are diazepam or morphine given intravenously; morphine is preferred by some because of its reversibility with naloxone. Clearly, the biggest concern with sedation lies in the depression or elimination of the patient's respiratory drive. Accordingly, sedation should never be used until the possibility of BLS ventilation has been tested. If a sedated patient should become unduly depressed following a failed attempt at orotracheal intubation, his ventilation may be supported until another attempt at an ALS airway can be made.[26] Intubation in awake patients is often associated with tachycardia, blood pressure elevation, laryngospasm, and cough.[27] These undesirable effects are blunted by means of topical laryngeal or systemic lidocaine administration. The dose for systemic administration is essentially the same as that for cardiac dysrhythmias (1-2 mg/kg bolus given intravenously). Laryngeal administration of lidocaine is less common because it involves a cricothyroid puncture.

The final option in accomplishing awake intubation is the use of neuromuscular blocking agents to effect a transient paralysis. To counter the dysphoria associated with awake paralysis, diazepam sedation usually accompanies the paralytic drug. The same caveat, only more so, concerning the preliminary testing of BLS ventilation arises with paralyzing agents. While succinylcholine and pancuronium are routinely used in many emergency departments, there are many cautions to their application. Physicians planning to employ these agents should receive special training in their use.[29] Neuromuscular blocking agents are especially useful in cases in which there is teeth clenching, trismus, or generalized seizure activity. They should also be considered in cases of serious head injury, in which coughing, bucking, and straining have been shown to be deleterious.[30]

Intubation in the Presence of Cervical Spine Injury

Finally, there is the patient requiring airway support who has suffered an injury to the cervical spine. The more common way of expressing this problem is "known or potential injury to the cervical spine," as many traumatized patients will have occult cervical spine injuries in addition to their other injuries.[31] The standard of care in these cases is to handle the patient as if he has a cervical spine injury until this possibility is completely excluded by radiography. Radiographs, however — even the most basic cross-table lateral view of the cervical spine — are time-consuming; the need for airway stabilization may be immediate. In these cases, patients are intubated by methods that produce the least cervical spine motion. BLS is continued by the jaw-lift maneuver. The EOA, also involving very little neck motion, may also be considered. Definitive airway management might be by blind nasotracheal intubation in the breathing patient or by neuromuscular blockade followed by careful orotracheal intubation with gentle in-line traction. There remains controversy as to whether any orotracheal approach — even one augmented by paralysis — is safe in this setting.[32] A study of neck motion in an experimental cadaver model with C5-C6 instability showed significant and unacceptable motion of the spine with all non-surgical approaches to intubation, including blind nasotracheal technique.[31] Clearly, in the apneic trauma patient, any airway is preferred to further apnea. The surgical approaches should be a part of the armamentarium of any physician who cares for trauma patients.

Conclusion

Even the most trying of airway management problems has its solution. The physician's dilemma is usually not one of having too few airway options but rather that of having too many and too little time in which to choose among them. In facing this challenge, physicians may find it helpful to categorize any particular airway problem into one of the three categories outlined here and then review the subset of airway options that applies to the situation.

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Transtruncal Impalement

The Surgical Strategy

Raymond M. Keltner, Jr., M.D.
St. Louis, Missouri

The crash of his ultralight aircraft resulted in a pilot's impalement on the control stick of the craft. The surgical management of his injury is described, with discussion of the historical treatment of impalement injuries.

Ultralight aircraft are very popular in sport flying. Zwimpfer and Gertzbein[1] have nicely described the nature of the aircraft, the lack of regulation in North America, and some of the risks inherent in their operation. A spectacular injury due to an ultralight crash was recently managed successfully.

Case Report

An ultralight aircraft enthusiast, aged 47, crashed in his aircraft, shortly after takeoff, into a freshly cultivated soybean field. Upon impact, his seatbelt failed, allowing him to be pitched upward and forward. He was impaled on the control stick (Fig 1 and Fig 4). The control stick entered the abdomen in the midline suprapubic region (Fig 2) and passed through the pelvis to exit from the right buttock (Fig 3 and Fig 4). The pilot was extracted from the destroyed machine after rescuers severed the control stick with a hacksaw. At the scene, he was alert without signs of hypovolemic shock. Another portion of the 4 cm diameter aluminum tube was removed to permit the patient's stabilization on a litter in the right lateral decubitus position. A splint was applied to an obvious deformity of his left wrist. He was transported by helicopter to The University Hospital, St. Louis.

At the hospital, the patient was alert and continued to have acceptable vital signs. Other lesions identified by a rapid trauma survey included a chip fracture of the anterior-inferior aspect of C-6, an intra-articular fracture of the radial styloid, and a deep laceration of the left heel. Evaluation of rectal injury, which was assumed to have occurred, was deferred until surgical exploration could be done. A urethrogram demonstrated the urethra to be intact. There were no significant abnormalities in the usual laboratory determinations. He had a history of essential hypertension, controlled by medication. Antibiotics were administered and tetanus protection provided.

The patient was taken to the operating room and placed under general anesthesia in the right lateral decubitus position. Attachments to the anterior protruding portion of the impaling control stick were removed, and the abdomen was prepared for celiotomy. The foreign body was gently withdrawn in an anterior to posterior direction. The patient was quickly turned to the supine position on the operating table, a sterile field isolated, and celiotomy commenced immediately.

At operation, a large laceration was found in the dome of the urinary bladder. A similar laceration was located to the right and posterior-superior to the trigone of the bladder with avulsion of the right ureter. The right ureter was found to be completely free in the pelvis and was ejecting clear urine. The right lobe of the prostate was nearly avulsed. The muscularis of the right lateral rectum was avulsed over a distance

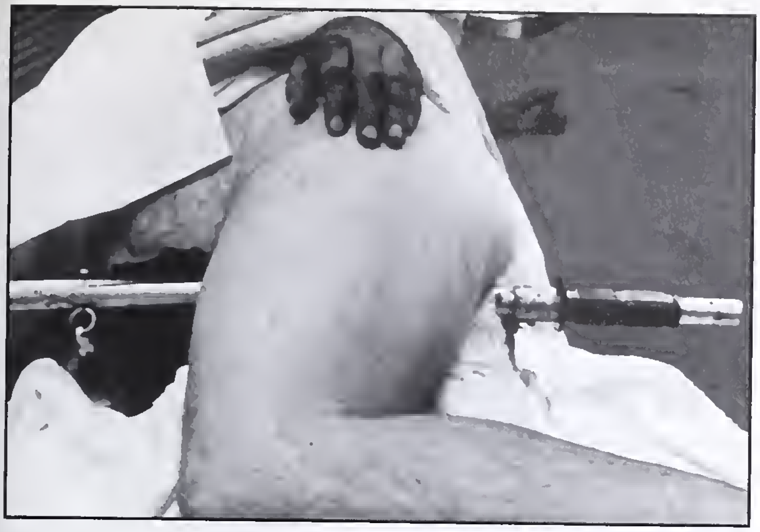

Fig 1. Transtruncal impalement by ultralight control stick.

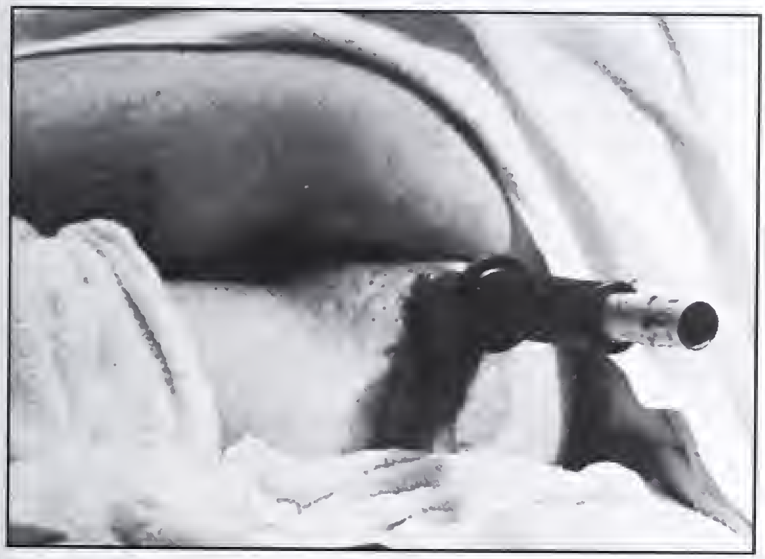

Fig 3. Transtruncal impalement; wound of exit.

of 5 cm. There was a large wound in the lateral pelvic soft tissue. Although there was no evident fecal contamination, the integrity of the rectum was in question. The rectal wound was debrided and closed with absorbable sutures. The posterior bladder wound was debrided and closed in layers with absorbable sutures. The right ureter was reimplanted in the bladder by way of a submucosal tunnel. A ureteral catheter stent was positioned and passed from the bladder in company with a suprapubic cystotomy tube after the anterior laceration in the bladder had been debrided and repaired in layers. A tangential sigmoid colostomy, or skin-level loop colostomy, was constructed. We chose this type of colostomy because of its simplicity of formation and closure. The abdominal wall at the site of impalement was debrided. The musculofascial layers of the abdominal wall were closed.

The patient was turned to the right lateral decubitus position and the rectum irrigated until a clear return was obtained. The wound of exit was debrided and left open. The left wrist was placed in a plaster cast.

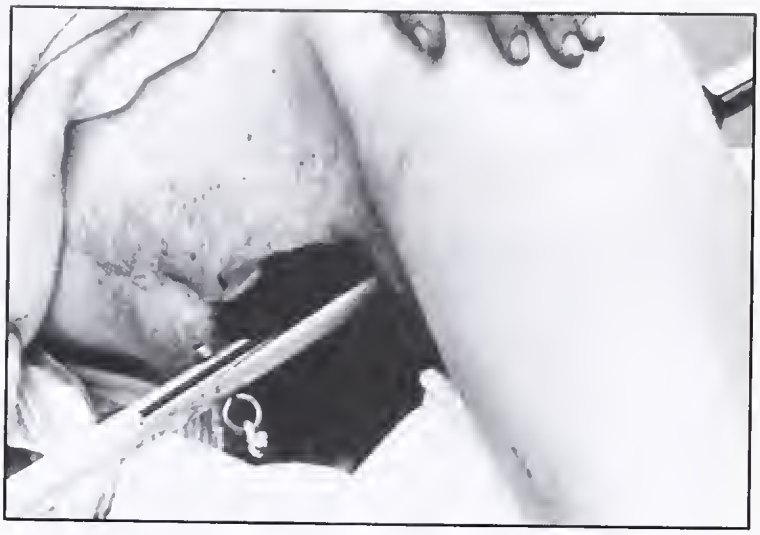

Fig 2. Transtruncal impalement; wound of entrance.

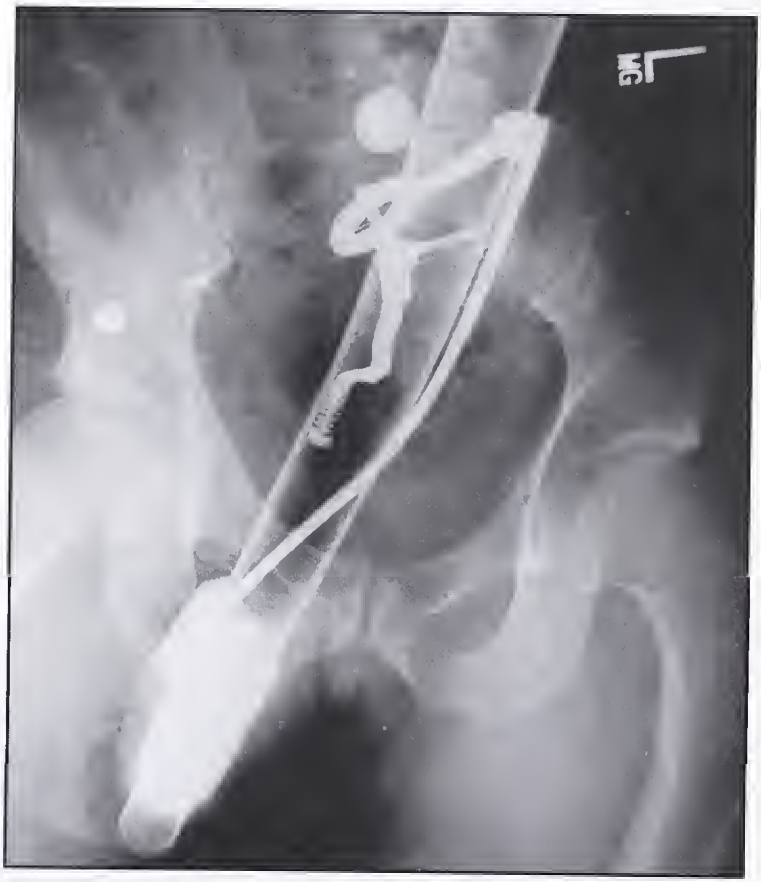

Fig 4. Transtruncal impalement; roentgenogram of pelvis.

The patient's postoperative course was uneventful. Antibiotics were discontinued after one postoperative dose. On the fifth postoperative day the patient was returned to the operating room, where the ureteral stent was removed and a split-thickness skin graft was applied to the defect resulting from the extensive debridement of skin and subcutaneous tissue from the anterior abdominal wall.

Urine drained from the posterior wound for five days and then ceased. The patient was discharged on the 14th hospital day with the suprapubic tube in place. Twenty days after injury the suprapubic tube was removed. The patient was able to void but developed some bladder spasm, which was promptly relieved by medication.

Six weeks after injury, all wounds having healed, the patient was re-admitted for colostomy closure. Barium enema examination and intravenous excretory ureogram results (Fig 5) were normal. Colostomy closure was accomplished without event. He was discharged on the fifth postoperative day and remains well 1½ years after injury.

Discussion

A case of cardiac impalement was recently reported with an emphasis on the importance of an integrated EMS-Trauma System in the management of such cases.[2] In the same paper McGill et al[2] summarized reports of torso impalement in tabular form.[3-14] There are surprisingly few cases of impalement reported since 1841. McGill's case[2] and ours make a total of 14 reports since 1841. It seems very likely that there are many additional unreported cases.

Rapid and expert extraction and transportation is essential to a satisfactory outcome in torso impalement cases. In our case The University Hospital-based helicopter was first on the scene. Flight nurses attended the patient during the extraction from the aircraft, which was accomplished by local fire department paramedics. This pattern of response has become common in nearby rural areas that cannot sustain an integrated system approach.

A review of the published experience with these spectacular injuries establishes certain shared characteristics. There is infrequent major vessel involvement, and the visceral trauma is manageable by established surgical techniques. The conventional wisdom in impalement cases dictates that the foreign object not be disturbed until surgical exposure of the injured viscera is obtained.[2, 3, 6, 8, 9, 15] This concept was stated by Bill[15] in 1862 in a treatise on the treatment of arrow wounds. In a recent report of a torso impalement, Horowitz[16] quoted from Bill's paper, describing autopsies in which arrow shafts had "plugged perfectly" wounds in vessels. Others have advocated this concept,[3, 6, 8, 9, 13, 17] echoing the notion that the foreign body may have prevented hemorrhage by tamponade of a penetrated vessel. Unquestionably, the surgical strategy adopted requires careful consideration. The incision should be designed so as to expose the organs or structures most likely injured. In our case, adequate exposure of the pelvic viscera could not have been obtained in the lateral decubitus position necessitated by the nature of the impalement.

Experience with this case seems to justify gentle removal of an impaling foreign body in the operating room with all preparations made to commence surgical exposure immediately.

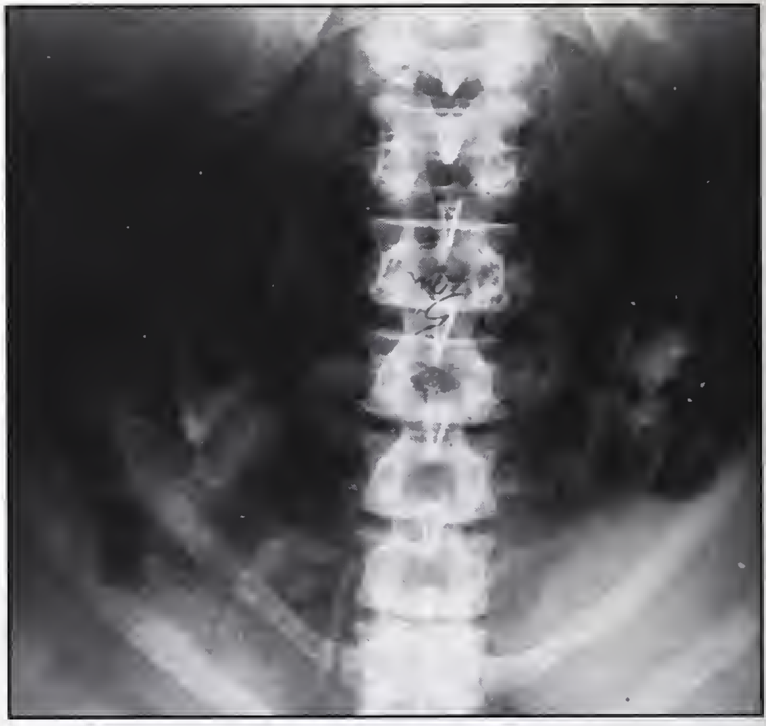

Fig 5. Transtruncal impalement; postoperative excretory urogram.

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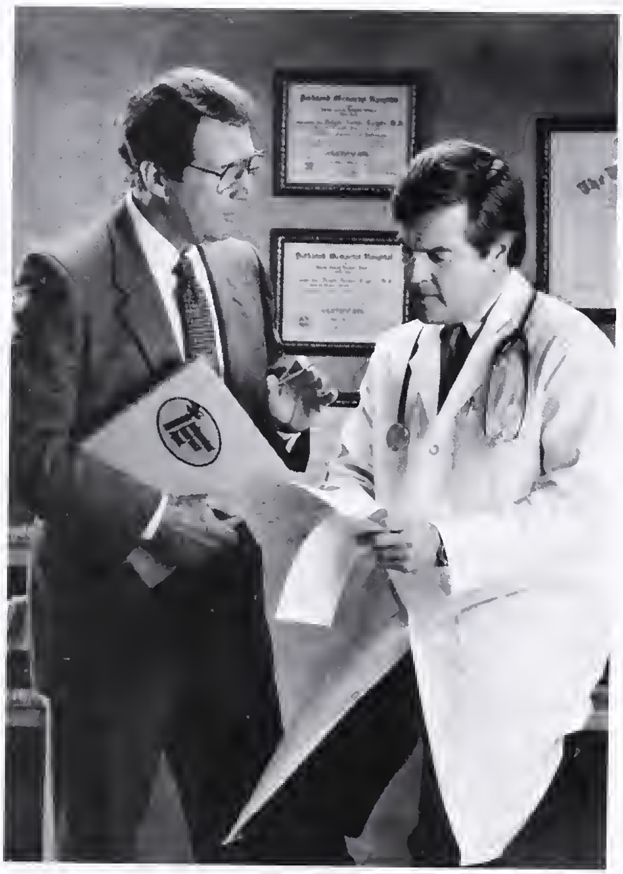

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■ **David M. Avery, M.D.,** 3231 S. National, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Avery received his preliminary education at Austin College and obtained his medical degree at the University of Texas Medical Branch in 1980. He completed his residency at the University of Texas Health Science Center, Dallas, TX. Dr. Avery specializes in cardio-thoracic surgery.

■ **Gary E. Baker, M.D.,** 1012 N. Main, Sikeston 63801, has become a member of the SEMO County Medical Society. Dr. Baker received his preliminary education at the University of Wyoming and obtained his medical degree at the Washington University School of Medicine in 1968. He completed his residency at the University of Missouri Medical Center, Columbia, MO. Dr. Baker specializes in pediatrics.

■ **Michael F. Bell, M.D.,** 1012 N. Main, Sikeston 63801, has become a member of the SEMO County Medical Society. Dr. Bell received his preliminary education at the University of Arkansas-Little Rock and obtained his medical degree at the University of Arkansas School of Medicine in 1982. He completed his residency at Wesley Medical Center, Wichita, KS. Dr. Bell specializes in general surgery.

■ **Gary D. Bernhardt, M.D.,** 13013 Fuller Ave., Suite B, Grandview 64030, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Bernhardt received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas School of Medicine in 1979. He completed his residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Bernhardt specializes in family practice.

■ **Kenneth J. Dempsey, M.D.,** 1012 N. Main, Sikeston 63801, has become a member of the SEMO County Medical Society. Dr. Dempsey received his preliminary education at the St. Louis College of Pharmacy and Allied Science and obtained his medical degree at the University of Missouri Columbia School of Medicine in 1962. He completed his residency at Marquette University, Milwaukee, WI. Dr. Dempsey specializes in dermatology.

■ **Michele A. Diaz-Arias, M.D.,** #1 Hospital Drive, UMC, Columbia 65203, has become a member of the Boone County Medical Society. Dr. Diaz-Arias received her preliminary education at St. Louis University and obtained her medical degree at the University of Missouri-Columbia School of Medicine in 1982. She completed her residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Diaz-Arias specializes in internal medicine.

■ **W. Joe Farley, M.D.,** Route 8, Box 339, Neosho 64850, has become a member of the Ozark County Medical Society. Dr. Farley received his preliminary education at Memphis State University and obtained his medical degree at East Tennessee State University in 1983. He completed his residency at the University of Tennessee and St. Francis Hospital, Memphis, TN. Dr. Farley specializes in family practice.

■ **John S. Fried, M.D.,** P.O. Box 7783, Overland Park, KS 66207, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Fried received his preliminary education at Pomona College and obtained his medical degree at Kansas University School of Medicine in 1978. He completed his residency at S.U.N.Y. Upstate Medical Center, Syracuse, NY. Dr. Fried specializes in infectious diseases.

■ **Thomas H. Garrett, M.D.,** P.O. Box 187 CB, Osage Beach 65065, has become a member of the Ozark County Medical Society. Dr. Garrett received his preliminary education at Central State College and Southeastern State College in Oklahoma and obtained his medical degree at the University of Oklahoma School of Medicine in 1965. He completed his residency at Baptist Medical Center, Oklahoma City, OK. Dr. Garrett specializes in emergency medicine.

■ **Laurence D. Gelstein, M.D.,** 6500 Chippewa, St. Louis 63109, has become a member of the St. Louis Metropolitan Medical Society. Dr. Gelstein received his preliminary education at the University of Michigan and obtained his medical degree at Washington University School of Medicine in 1981. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Gelstein specializes in urology.

■ **Lee V. Giorgi, M.D.,** 4320 Wornall Road, Suite II-20, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Giorgi received his preliminary education at St. John's University and obtained his medical degree at the University of Minnesota School of Medicine in 1977. He completed his residency at St. Luke's Hospital of Kansas City, Kansas City, MO. Dr. Giorgi specializes in internal medicine.

■ **Donna M. Graessle, D.O.,** 17216 W. 67th, Shawnee Mission, KS 66216, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Graessle received her preliminary education at St. Mary's College and obtained her osteopathic degree at the University of Health Sciences in 1986. She completed her residency at the UMKC School of Medicine-Consortium for Health Education, Kansas City, MO. Dr. Graessle specializes in internal medicine.

■ **Bruce D. Graham, M.D.,** 4320 Wornall Road, 304 Medical Plaza, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Graham received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1981. He completed his residency at Ferguson Hospital, Grand Rapids, MI. Dr. Graham specializes in colon rectal surgery.

■ **Mary K. Gumerlock, M.D.,** One Hospital Drive, Department of Surgery, UMC Hospital and Clinics, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Gumerlock received her preliminary education at the University of San Francisco and Marquette University and obtained her medical degree at the University of California-Irvine College of Medicine in 1977. She completed her residency at the Oregon Health Sciences Center, Portland, OR. Dr. Gumerlock specializes in neurosurgery.

■ **Gene O. Harpster, M.D.,** 4800 College Blvd., Overland Park, Kansas 66211, has become a member of the Clay-Platte County Medical Society. Dr. Harpster received his preliminary education at Kansas State University and obtained his medical degree at the University of Kansas School of Medicine in 1957. He completed his residency at Menorah Medical Center, Kansas City, MO. Dr. Harpster specializes in general surgery/aviation medicine.

■ **Peri L. Hickman, M.D.,** 2727 Main, Suite 100, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hickman received his preliminary education at the University of Oklahoma and obtained his medical degree at the University of Oklahoma School of Medicine in 1986. He is completing his residency at the UMKC Affiliated Hospitals, Kansas City, MO. Dr. Hickman specializes in internal medicine/pediatrics.

■ **John J. Horan, Jr., M.D.,** 9701 Landmark Parkway Drive, Sunset Hills Medical Center, St. Louis 63127, has become a member of the St. Louis Metropolitan Medical Society. Dr. Horan obtained his medical degree at the St. Louis University School of Medicine in 1971. He completed his residency at Cardinal Glennon Children's Hospital, St. Louis, MO. Dr. Horan specializes in pediatrics.

■ **R. Bruce Hoskins, M.D.,** 44th and Wornall, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Hoskins received his preliminary education at the University of Kentucky and obtained his medical degree at the University of Kentucky School of Medicine in 1977. He completed his residency at Massachusetts General Hospital, Boston, MA. Dr. Hoskins specializes in radiation oncology.

■ **William J. Hubbard, M.D.,** 1231 First Street, Kennett 63857, has become a member of the Dunklin County Medical Society. Dr. Hubbard received his preliminary education at Millsaps College and obtained his medical degree at the University of Mississippi School of Medicine in 1977. He completed his residency at Gorgas Army Hospital, Phoenix, AR. Dr. Hubbard specializes in orthopaedic surgery.

■ **John P. Hubert, Jr., M.D.,** 10004 Kennerly Road, Suite 103, St. Louis 63128, has become a member of the St. Louis Metropolitan Medical Society. Dr. Hubert obtained his medical degree at the University of Minnesota School of Medicine in 1975. He completed his residency at the Mayo Graduate School of Medicine, Rochester, MN. Dr. Hubert specializes in general surgery.

■ **Jeffrey T. Jones, M.D.,** 2700 McClelland, Suite 304, Joplin 64804, has become a member of the Jasper County Medical Society. Dr. Jones received his preliminary education at Southwest Missouri State University and obtained his medical degree at the University of Arkansas School of Medicine in 1980. He completed his residency at the University of South Dakota, Yankton, SD. Dr. Jones specializes in gynecology.

■ **Winston H. Kitchin, M.D.,** 6400 Clayton Road, Suite 412, St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Kitchin obtained his medical degree at Emory University School of Medicine in 1981. He completed his residency at Emory University Affiliated Hospitals, Atlanta, GA. Dr. Kitchin specializes in psychiatry.

■ **Marvin J. Lopez, M.D.,** 1231 Jake Lane, Columbia 65203, has become a member of the Boone County Medical Society. Dr. Lopez received his preliminary education at Clasanz College and obtained his medical degree at the Universidad Autonoma de Guadalajara School of Medicine in 1970. He completed his residency at Montreal General Hospital, McGill University, Montreal, Canada. Dr. Lopez specializes in general surgery.

■ **Gerald C. Lynch, M.D.,** 6400 Prospect, Suite 138, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Lynch received his preliminary education at the University of North Carolina and obtained his medical degree at the University of North Carolina School of Medicine in 1984. He completed his residency at Allegheny General Hospital, Pittsburgh, PA. Dr. Lynch specializes in anesthesiology.

■ **Richard W. Martin, M.D.,** 401 Keene Street, Columbia 65201, has become a member of the Boone County Medical Society. Dr. Martin received his preliminary education at Cornell University and obtained his medical degree at Stanford University School of Medicine in 1980. He completed his residency at Stanford University Medical Center, Palo Alto, CA. Dr. Martin specializes in pediatrics.

■ **John J. McGraw, M.D.,** 1012 North Main, Sikeston 63801, has become a member of the SEMO County Medical Society. Dr. McGraw received his preliminary education at William Carey College and obtained his medical degree at the University of Mississippi School of Medicine in 1978. He completed his residency at St. Louis University Medical Center, St. Louis, MO. Dr. McGraw specializes in orthopaedic surgery.

■ **Yvonne C. Newland-Pagan, M.D.,** 1231 First Street, Kennett 63857, has become a member of the Dunklin County Medical Society. Dr. Newland-Pagan received her preliminary education at New York University and obtained her medical degree at Mt. Sinai Medical School in 1982. She completed her residency at Albert Einstein/Montefiore Medical Center, Bronx, NY. Dr. Newland-Pagan specializes in family practice.

■ **William J. Otto, M.D.,** 3231 S. National, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Otto received his preliminary education at Lawrence University and obtained his medical degree at Baylor College of Medicine in 1978. He completed his residency at Fitzsimons Army Medical Center, Denver, CO. Dr. Otto specializes in obstetrics/gynecology.

■ **Deborah L. Parks, M.D.,** 4652 Maryland Ave., St. Louis 63108, has become a member of the St. Louis Metropolitan Medical Society. Dr. Parks obtained her medical degree at the University of Louisville School of Medicine in 1982. She completed her residency at Barnes Hospital, St. Louis, MO. Dr. Parks specializes in internal medicine.

■ **Steven T. Parrish, M.D.,** 2727 Main, Suite 100, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Parrish received his preliminary education at the University of Virginia and obtained his medical degree at the Medical College of Virginia in 1987. He completed his residency at the UMKC School of Medicine Affiliated Hospitals, Consortium for Health Education, Kansas City, MO. Dr. Parrish specializes in emergency medicine.

■ **Padma I. Raju, M.D.,** 1325 S. Grand Blvd., St. Louis 63014, has become a member of the St. Louis Metropolitan Medical Society. Dr. Raju received his preliminary education at W.G.B. College, India and obtained his medical degree at the All India Institute of Medical Sciences, New Delhi in 1976. He completed his residency at the University of Kentucky Medical Center, Lexington, KY. Dr. Raju specializes in radiation oncology.

■ **Vasuki Ramakrishnan, M.D.,** 1100 S. Springfield Road, Bolivar 65613, has become a member of the Dallas-Hickory-Polk-Dade County Medical Society. Dr. Ramakrishnan received his preliminary education at Ethiraj College, India and obtained his medical degree at Nadrad Medical College, India in 1974. He completed his residency at Texas Children's Hospital, Houston, TX. Dr. Ramakrishnan specializes in pediatrics.

■ **Gary J. Roloson, M.D.,** 24th at Gillham Road, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Roloson received his preliminary education at the University of California-San Diego and obtained his medical degree at Duke University School of Medicine in 1980. He completed his residency at L.A. County-U.S.C. Medical Center, Los Angeles, CA. Dr. Roloson specializes in pathology.

■ **Rolande C. Romain, M.D.,** 6025 Prospect Ave., Suite 201, Kansas City 64130, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Romain received his preliminary education at the Center for Secondary Studies, Haiti and obtained his medical degree at the Medical School of Haiti in 1971. He completed his residency at the District of Columbia General Hospital, Washington, D.C. Dr. Romain specializes in pediatrics.

■ **Ghaleb A. Saab, M.D.,** 3302 McIntosh Circle, Joplin 64803, has become a member of the Jasper County Medical Society. Dr. Saab received his preliminary education at the American University of Beirut, Lebanon and obtained his medical degree at the American University Medical School, Beirut, Lebanon in 1974. He completed his residency at the American University Medical Center, Beirut, Lebanon. Dr. Saab specializes in internal medicine.

■ **Ralph S. Schmitz, M.D.,** One Hospital Drive, UMC Hospital and Clinics, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Schmitz received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1987. He is completing his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Schmitz specializes in family medicine.

■ **Thomas L. Spray, M.D.,** 400 S. Kingshighway, Suite 5W24, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Spray received his preliminary education at Haverford College and obtained his medical degree at Duke University School of Medicine in 1974. He completed his residency at Duke University Medical Center, Durham, NC. Dr. Spray specializes in general surgery.

■ **Vasantha K. Sundaram, M.D.,** 1000 Primrose, #180, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Sundaram received her preliminary education at Stella Maris College, India and obtained her medical degree at Christian Medical College, India in 1963. She completed her residency at Queen Elizabeth Hospital. Dr. Sundaram specializes in pediatrics and clinical genetics.

■ **Lisa A. Susman, M.D.,** 2727 Main, Suite 100, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Susman received her preliminary education at the University of Missouri-Kansas City and obtained her medical degree at the UMKC School of Medicine in 1987. She is completing her residency at the Consortium for Health Education, Kansas City, MO. Dr. Susman specializes in internal medicine.

■ **Janie K. Vestal, M.D.,** 1150 E. Latoka, P.O. Box 777, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Vestal received her preliminary education at the University of Missouri-Kansas City and obtained her medical degree at the UMKC School of Medicine in 1982. She completed her residency at Brown University, Providence, RI. Dr. Vestal specializes in family medicine.

■ **Samuel J. Walters, M.D.,** 777 North Blue Parkway, Lee's Summit 64063, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Walters received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1985. He completed his residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Walters specializes in family practice.

■ **Mark W. Wurster, M.D.,** 4320 Wornall Road, Suite 236, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Wurster received his preliminary education at Brown University and obtained his medical degree at the Brown University School of Medicine in 1982. He completed his residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Wurster specializes in internal medicine.

■ Student Members

University of Missouri-Kansas City

Lin W. Clark

St. Louis University

Gunhilde M. Buchsbaum
Paul Dabrowski
James M. Gerard
Ann M. Schneider
Jordan B. Sterns

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For otitis media

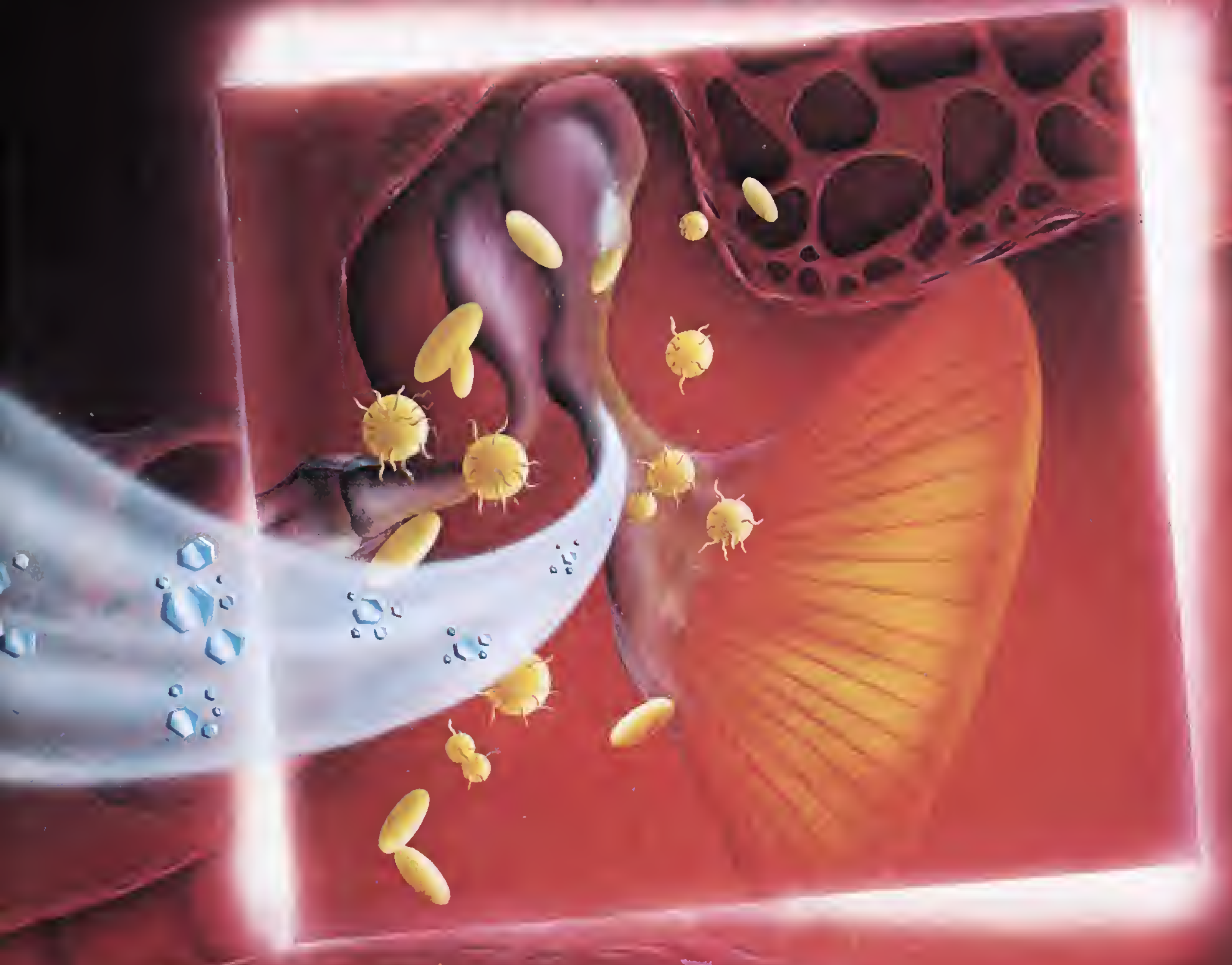

Illustration of Bactrim power in middle ear infection.

Bactrim Power

- **Penetrates**
- **Concentrates**
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Bactrim concentrates in hard-to-reach infections[1] to overpower susceptible strains of *H. influenzae* and *S. pneumoniae (in vitro)*[2] year after year. B.i.d. dosing, cherry flavor and economy keep successful therapy within your power. Especially when you remember to protect your prescribing decision by specifying D.A.W.

In vitro results may not correlate with clinical results. Not indicated for prophylactic or prolonged use in otitis media and contraindicated in infants under two months of age.

Specify *"Dispense as written"*

Bactrim™ Pediatric

(40 mg trimethoprim and 200 mg sulfamethoxazole per 5 mL)

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Please see references and summary of product information on following page.

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Specify "Dispense as Written," "Do Not Substitute," or "Brand Necessary" according to your state regulations.

References: 1. Klimek JJ, *et al: J Pediatr 96*:1087-1089, 1980. **2.** BAC-DATA Medical Information Systems, Inc., Volume I, 1986.

Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:
CONTRAINDICATIONS: Hypersensitivity to trimethoprim or sulfonamides; documented megaloblastic anemia due to folate deficiency; pregnancy at term and during the nursing period; infants less than two months of age

WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.

BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, arthralgia, cough, shortness of breath, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently

BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A ß-hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.

PRECAUTIONS: *General:* Give with caution to patients with impaired renal or hepatic function, possible folate deficiency (*e.g.*, elderly, chronic alcoholics, patients on anticonvulsants, with malabsorption syndrome, or in malnutrition states) and severe allergies or bronchial asthma In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur, frequently dose-related.

Use in the Elderly: May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, *e.g.*, impaired kidney and/or liver function, concomitant use of other drugs. Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) or a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly. In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported Make appropriate dosage adjustments for patients with impaired kidney function (see DOSAGE AND ADMINISTRATION).

Use in the Treatment of Pneumocystis Carinii Pneumonia in Patients with Acquired Immunodeficiency Syndrome (AIDS): AIDS patients may not tolerate or respond to Bactrim in same manner as non-AIDS patients. Incidence of side effects, particularly rash, fever, leukopenia, elevated aminotransferase (transaminase) values, with Bactrim in AIDS patients treated for *Pneumocystis carinii* pneumonia reported to be greatly increased compared with incidence normally associated with Bactrim in non-AIDS patients

Information for Patients: Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.

Laboratory Tests. Perform complete blood counts frequently, if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.

Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time. Bactrim may inhibit the hepatic metabolism of phenytoin Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations.

Drug/Laboratory Test Interactions. Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffe alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.

Carcinogenesis, Mutagenesis, Impairment of Fertility Carcinogenesis: Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. *Mutagenesis:* Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination, concentrations used exceeded blood levels of these compounds following therapy with Bactrim. Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities *Impairment of Fertility* No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole

Pregnancy: Teratogenic Effects: Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folic acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus Nonteratogenic Effects: See CONTRAINDICATIONS section.

Nursing Mothers: See CONTRAINDICATIONS section.

Pediatric Use. Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections)

ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria) **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION)**

Hematologic: Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia *Allergic Reactions:* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarteritis nodosa and systemic lupus erythematosus have been reported *Gastrointestinal:* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia *Genitourinary* Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria *Neurologic:* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache *Psychiatric:* Hallucinations, depression, apathy, nervousness *Endocrine:* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. *Respiratory:* Pulmonary infiltrates *Musculoskeletal:* Arthralgia, myalgia *Miscellaneous:* Weakness, fatigue, insomnia.

DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN. *Usual adult dosage* for urinary tract infections is one DS tablet, two tablets or four teaspoonfuls (20 ml) *b.i.d.* for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. *Recommended dosage for children* with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days Use identical daily dosage for 5 days for shigellosis. *Renal Impaired:* Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS: Usual adult dosage is one DS tablet, two tablets or four teasp. (20 ml) *b.i.d.* for 14 days

PNEUMOCYSTIS CARINII PNEUMONIA: Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days See complete product information for suggested children's dosage table.

HOW SUPPLIED: *DS (double strength) Tablets* (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100, Prescription Paks of 20. *Tablets* (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40 *Pediatric Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). *Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint).

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Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

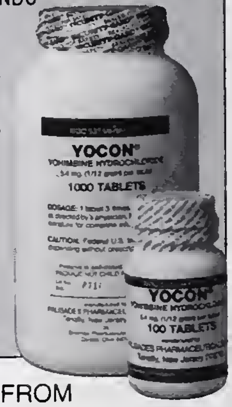
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



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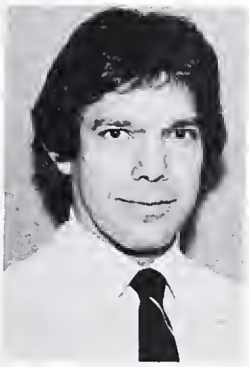
Medical School News

St. Louis University

■ **Harold L. Kennedy, M.D., M.P.H.** chief of the division of cardiology, St Louis University School of Medicine, was elected to the Alpha Chapter of Delta Omega, the national honorary public health society, at Johns Hopkins University.



The Alpha Chapter elects students, faculty and alumni for scholarly achievement and leadership in public health. Dr. Kennedy was honored at the Delta Omega annual meeting, dinner and special induction ceremony.

Under Dr. Kennedy's leadership the division of cardiology has expanded significantly in the areas of cardiovascular services and excelled in research and academic accomplishment. Medical center cardiologists are recognized as national leaders in preventive cardiology, percutaneous transluminal angioplasty, the study of TPA in the multicenter TIMI trial and Holter monitoring of cardiac arrhythmias.

Dr. Kennedy received his medical degree from the University of Missouri School of Medicine in 1964 and trained in internal medicine and cardiology at the University of Michigan and St. Georges Hospital in London, England. He later received a masters in public health degree in epidemiology and preventive cardiology from Johns Hopkins University School of Hygiene and Public Health in 1977.

He served in the Peace Corps in Brazil from 1965 to 1966, the Indian Health Service from 1966 to 1971 and the U.S. Public Health Service.

Dr. Kennedy has published chapters in 12 books, authored one textbook, 200 abstracts and manuscripts and has presented scientific data at 200 national and international presentations. He is internationally known for his cardiology research in ambulatory (Holter) monitoring, cardiac arrhythmias, silent myocardial ischemia and sudden death.

Dr. Kennedy is a member of the American College of Chest Physicians, the American Public Health Association and the American Heart Association's councils of epidemiology and clinical cardiology.

■ **Robert Heaney, M.D.**, assistant professor and director of the division of general internal medicine at St. Louis University School of Medicine, has been awarded a two-year, $42,500 grant to study aerosol administration of ribavirin, an antiviral drug, in patients with influenza virus infections.

The study will test the effectiveness of ribavirin in the treatment of cardiovascular and pulmonary diseases in people over the age of 55 with flu symptoms. Ribavirin has been proven effective in reducing the duration and severity of flu symptoms in children and young adults.

Dr. Heaney received his medical degree in 1978 from Creighton University in Omaha, Nebraska. He is a member of the American College of Physicians, the American Academy for Advancement of Sciences, the American Diabetes Association and is a diplomate of the American Board of Internal Medicine. He joined St. Louis University in 1981.

■ **Raj Nakra, M.D.**, assistant professor of psychiatry at St. Louis University School of Medicine, received a $5,000 grant from Burroughs Wellcome Co. to study Buproprian Hydrochloride for the treatment of severe depression.

Dr. Nakra is studying the effects of the drug on people who have not responded to currently-available medications or cannot tolerate their negative side effects such as drowsiness and weight gain. Dr. Nakra is conducting the study along with **Raj Jupalli, M.D.**, fellow in geriatric psychiatry and **George Grossberg, M.D.**, associate professor of psychiatry and director of geriatric psychiatry.

Dr. Nakra received his medical degree in 1966 from Punjab University in Punjab, India. He joined St. Louis University Medical Center in 1982.

■ **Larry D. Samuels, M.D.**, professor of nuclear medicine at St. Louis University School of Medicine, has been awarded a $23,250 grant by the Du Pont Corporation. Dr. Samuels will study the effectiveness of Neurolite, a brain blood flow agent, for diagnostic brain imaging tests.

Neurolite will be used in conjunction with the new SPECT brain camera in the department of nuclear medicine. The chemical is injected intravenously and accumulates throughout the brain proportionate to blood flow. Brain images obtained with Neurolite may be useful in the diagnosis of stroke, Alzheimer's disease, some mental illnesses and for the localization of seizures in patients with epilepsy.

Dr. Samuels received his medical degree in 1959 from the University of Illinois College of Medicine in Chicago. He has been with St. Louis University Medical Center since 1982.

■ **Virgil W. Fittje** has been named deputy associate vice president for Regional Health Care, St. Louis University Medical Center. The appointment, effective July 21, 1988, was announced by **Arthur E. Baue, M.D.**, vice president for St. Louis University Medical Center.

Fittje will be responsible for coordinating programs of Regional Heath Care with the Continuing Education and Faculty Practice programs of St. Louis University School of Medicine, and the Physician Relations and Marketing departments of The University Hospital.

The medical center's outreach program includes HealthLine Corporate Health Services, HealthLine Family Health Services, HealthLine Physician Services and HealthLine Rural Health Services.

He will work closely with **Robert M. Donati, M.D.**, associate vice president for Regional Health Care and senior associate dean of the School of Medicine.

Fittje comes to the medical center from St. Louis County Hospital, where he served as executive director of the institution and director of the Skilled Nursing Facility and Primary Care Program.

In 1955, Fittje earned his Master's in health care administration and planning at Washington University. He served a residency at Barnes Hospital, and later returned as assistant administrator after being discharged from the Air Force in 1957.

■ **John Joseph Brems, M.D.,** has been appointed chief of the liver transplantation program, a new program at St. Louis University Medical Center.

He comes to St. Louis University Medical Center from the University of California, Los Angeles, where he was part of a team that performed more than 200 successful liver transplants in the past two years.

As chief of the liver transplantation program, Dr. Brems will perform liver transplants in adults at The University Hospital and in children at Cardinal Glennon Children's Hospital. He will also serve as assistant professor of surgery at St. Louis University School of Medicine.

Dr. Brems received his medical degree in 1981 from St. Louis University School of Medicine. He served his internship and residency at St. Louis University Medical Center. He trained as a fellow in liver transplantation at the University of California, Los Angeles, where he joined the faculty as an assistant professor of surgery in 1987.

Dr. Breems performed his first liver transplant at the medical center on July 25. He plans to perform 25 transplants the first year.

■ **Mark Kline, M.D.,** assistant professor of pediatrics at St. Louis University School of Medicine, has been awarded two grants totaling $33,674 from Lilly Research Laboratories to study an experimental antibiotic listed as LY 163892.

The first study is funded by a $16,255 grant and will evaluate the use of the experimental antibiotic against penicillin to determine the best treatment for tonsillitis and pharyngitis in children. The second grant of $17,419 will be used to study the same antibiotic against a cephalosporin antibiotic in the treatment of soft tissue and skin infections.

Penicillins and cephalosporins are effective in the treatment of infections in children. The purpose of this study is to determine whether the new antibiotic is as effective as these available agents while reducing the frequency with which the drug must be administered.

Dr. Kline received his medical degree in 1981 from Baylor College of Medicine. He served his internship, residency and infectious disease fellowship at Baylor College of Medicine/Texas Children's Hospital. Dr. Kline is a member of the American Society for Microbiology, Infectious Disease Society of America and the Pediatric Infectious Disease Society.

■ **Michael D. Maves, M.D.,** has been named chairman of the department of otolaryngology — head and neck surgery (ENT), St. Louis University School of Medicine, effective July 1.

He comes to St. Louis University Medical Center from the University of Iowa Hospitals and Clinics, where he served as professor of otolaryngology and director of the division of head and neck surgical oncology in the department of otolaryngology.

Dr. Maves' goals for the department are to build on its existing strengths as well as broaden its expertise by recruiting additional surgeons and researchers who specialize in otolaryngology.

After receiving his medical degree from Ohio State University College of Medicine in Columbus, Ohio, in 1973, Dr. Maves served his residency at the Ohio State University Hospitals and in 1977 served a research fellowship at the college's Otological Research Laboratories.

Dr. Maves later served a fellowship at Columbia-Presbyterian Medical Center in New York, where he worked with John Conley, M.D., one of the nation's outstanding otolaryngologic surgeons. Dr. Maves was also a fellow of head and neck and facial plastic surgery at the University of Iowa Hospital and Clinics in 1980-81. In 1988, Dr. Maves received an executive master's in business administration from the College of Business Administration, University of Iowa.

He has received several distinguished honors, including the University of Iowa 1986 Burlington Northern Faculty Achievement Award for teaching excellence and the 1987 American Academy of Otolaryngology-Head and Neck Surgery Honor Award.

University of Missouri-Kansas City

■ The final stages of construction are expected to be complete on what will be a center for scholars. Provost emeritus **E. Grey Dimond, M.D.,** is donating his home, located on Hospital Hill adjacent to the medical school and Truman Medical Center to the University. For the past 12 years, Dr. Dimond gradually has made his domain, known as *Diastole*, a public one.

In addition to the center, Dr. Dimond also plans to endow two annual or biennial prizes known as **Mary Clark Dimond** awards, named to commemorate his late wife. One of these awards will recognize international statesmanship, and the other will recognize Chinese scholars. A seven-member Scholar's Council will be responsible for planning and recommending the use of the facilities, which could include both intellectual pursuits, such as graduate seminars, and extend to retreats, receptions, reunions, and faculty-student gatherings. An 18-member board will be appointed next year to oversee the endowment and the property. Board members will represent the University's various scholars, local governments, hospitals, and law firms.

■ One-hundred first-year students and eight upperclassmen recently joined the School of Medicine. Of the first-year students, 85 are from in-state and 15 are from out-of-state, and females outnumber males 57 to 43. The upperclassmen, known as advanced-standing students, enter medical school with undergraduate and often graduate degrees. Two of this year's eight new upperclassmen students are candidates for M.D./Oral Surgery degrees. These are students who already have earned their D.D.S. degrees, enter medical school at the Year-3 level in UMKC's six-year program, earn their M.D. degrees, and are oral surgery residents.

■ More than 600 runners participated in the second annual Sight-a-thon June 12. Sponsored by the Eye Foundation of Kansas City, the 5K run is intended to help raise funds to support the not-for-profit Eye Foundation. Since last year's inaugural run, which coincided with the opening of the facility, physicians at the Eye Foundation have improved the vision of more than 3,000 people. Affiliated with the Department of Ophthalmology at UMKC and Truman Medical Center, the Foundation provides premiere eye care to residents throughout the region, pioneers new advances in eye care, and trains ophthalmologists.

■ The Eye Foundation of Kansas City held its first annual alumni meeting June 11, with **Hal Mackenzie Freeman, M.D.,** as keynote speaker. Dr. Freeman is an associate clinical professor of Ophthalmology at Harvard Medical School, and a member of the Retina Associates in Boston. Graduates of the program came from around the country to make presentations and tour the one-year-old Eye Foundation facilities.

■ **William Robinson, M.D.,** and **Christopher Sirridge, M.D.,** recently were re-elected to the post of chairman and vice-chairman of the School's Faculty Council. The Faculty Council acts as an informational forum, and as a liaison for the relationship of the School's faculty members with the rest of the University. Dr. Robinson is an associate professor, chairman of the Department of Emergency Health Services, and vice chairman of the Council on Evaluation. Dr. Sirridge is a docent and assistant professor of Hematology/Oncology.

■ The School of Medicine and Truman Medical Center's Department of Obstetrics/Gynecology recently co-sponsored a presentation on "Estrogen/Progesterone Replacement Therapy," by **Donald Gambrell, Jr., M.D.,** of the Department of Reproductive Endocrinology at the Medical College of Georgia.

■ Senior medical student **Patricia Allen** recently was named one of the Outstanding Young Women of America (OYWA). Now in its twenty-third year, the OYWA program is designed to honor and encourage exceptional women between the ages of 21 and 36 who have distinguished themselves in many fields of endeavor, including service to the community, professional leadership, academic achievement, business advancement, cultural accomplishments, and civic and political participation.

■ Twenty high-school juniors and seniors completed a three-week learning experience in August at the School of Medicine and Truman Medical Center. These students, known as Summer Scholars, are minority and disadvantaged students who, through the Summer Scholars program, get an early introduction to health care, as well as exposure to other academic and special skills that will help them as they pursue higher education of any kind.

■ **Stephen Dahl, Pharm.D.,** recently made a presentation on "Second-line Antirheumatic Drugs in the Treatment of Elderly Patients with Rheumatoid Arthritis," at the American Rheumatism Association in Houston, Texas.

■ **Richardson K. Noback, M.D.,** spoke on "A Model To Reach Health Care Professionals in Rural Missouri," at the Geriatric Education Center Meeting in Houston, Texas.

■ **Daniel Koehn, M.D.,** a resident in Family Practice at Truman Medical Center-East, was among the physicians interviewed and photographed for an article in the June 28, 1988 issue of *USA Today,* which discussed some of the issues faced by first-year residents.

The University of Missouri-Columbia

■ **K. William Logan, M.D.,** associate professor of radiology and medical physicist at Truman Veterans Hospital, has developed a brain-scanning device that, in July, netted UMC its largest patent ever. The Missouri University Multi-Plane Imager takes four images at a time instead of one and, at about $300,000, costs half as much as existing scanners. The imager probably will be placed on the market in about two years.

■ **Jawad Ali, Ph.D.,** has become an assistant professor of obstetrics and gynecology and director of the new Center for Fertility and Cryobiology. The clinic is part of the new Women's Health Center in the Green Meadows Medical Clinic. Dr. Ali was director of laboratory services for Midwest Fertility Foundation and Laboratories of Kansas City and was an assistant professor of immunology at the University of Missouri-Kansas City School of Medicine.

■ **Larry Baddour, M.D., Gordon C. Christensen, M.D.,** and **W. Andrew Simpson, Ph.D.,** have joined the Department of Medicine as associate professors in the division of infectious disease. Drs. Simpson and Christensen have joint appointments in the Department of Microbiology and are also clinical investigators at Truman Veterans Hospital. All were formerly on the faculty of the University of Tennessee Center for the Health Sciences College of Medicine in Memphis. **Hattie Gresham, Ph.D.,** also has joined the department as an assistant clinical research professor.

■ **Giulio J. Barbero, M.D.,** chairman of the Department of Child Health, was selected as a distinguished guest lecturer by Warner-Lambert for the Institute for Child Development's conference on developmental-behavioral disorders in Hilton Head, S.C. He spoke on "The Doctor-Patient Relationship."

■ **Bernard D. Beitman, M.D.,** associate professor of psychiatry, and **Imad M. Al-Basha, M.D.,** assistant professor of psychiatry, are co-principal investigators for a collaborative study to examine the efficacy of a new medication in the treatment of panic disorder. The Upjohn Co. has awarded a $160,000 grant to the Department of Psychiatry as part of the collaborative study involving Duke University, the University of Wisconsin and the University of California at Davis.

■ **Imelda Bulatio, M.D.,** has been named an assistant professor of pathology. Dr. Bulatio attended medical school in the Philippines and completed surgical pathology and dermatopathology fellowships at the University of Minnesota Medical School in Minneapolis.

■ **Gail Carlson, Ph.D.,** is the new state specialist for health education. Dr. Carlson had worked as a state child- and family-development specialist at Lincoln University in Jefferson City.

■ **David Clark, M.D.,** assistant professor of dermatology, was named director of the University's new Mohs Micrographic Surgery Center, the only facility in mid-Missouri providing specialized treatment for difficult skin cancers.

■ **Leonard R. Forte, Ph.D.,** professor of pharmacology, has received the Veterans Administration's Research Career Scientist award. The $350,000 seven-year award provides salary support for senior scientists in VA research service.

■ **Elizabeth Garrett, M.D.,** and **Andrew Nelson, M.D.,** have joined the Department of Family and Community

Medicine. Dr. Garrett will be an assistant professor and director of the primary-care clerkship program. Dr. Nelson will be a clinical instructor for the department's satellite practice in Fayette.

- **Basil Georgi, M.D., Alfred Harding, M.D.**, and **Arthur J. Pearl, M.D.**, have joined the Department of Surgery. Dr. Pearl is an associate professor of orthopaedic surgery and chief of orthopaedic surgery at Truman Veterans Hospital. Dr. Georgi is assistant professor of transplantation surgery. Dr. Harding is assistant professor of general surgery.

- **Lanis L. Hicks, Ph.D.**, associate professor of health services management, was part of a team of public health specialists who visited the People's Republic of China during June as part of the Citizen Ambassador Program of People to People International. The purpose of the program was to share current knowledge of Western health systems with Chinese counterparts.

- **Martin L. Katz, Ph.D.**, research assistant professor of ophthalmology, was appointed to the professional advisory board of the National Batten Disease Registry and received a $10,000 grant from the Children's Brain Diseases Foundation to study the metabolic basis of Batten disease, a juvenile neurological disease.

- **David M. Klachko, M.D.**, professor of endocrinology and metabolism, presented a paper, "Designing an Index for a Computerized Endocrine Patient Registry," at the July International Congress of Endocrinology in Kyoto, Japan.

- **Zuhdi Lababidi, M.D.**, associate professor of child health, was honored for his pioneering work in balloon aortic valvuloplasty at the Annual American College of Cardiology Meeting in Atlanta in March.

- **Rodney Landreneau, M.D.**, and **Weerachai Nawarawong, M.D.**, have joined the division of cardiothoracic surgery. Dr. Nawarawong completed his residency at the University Hospital and Clinics and is a clinical instructor. Dr. Landreneau, who was a member of the department of surgery at the University of Texas Southwestern Medical Center in Dallas, is an assistant professor.

- **Beryl Ortwerth, Ph.D.**, professor of ophthalmology and biochemistry, was named a Distinguished Scientist by Alcon Laboratories and was awarded $50,000 to support his research on the biochemistry of cataract formation.

- **Richard Oliver, Ph.D.**, associate professor and director of the School of Health Related Professions, in June presented a paper on adult day care at the first World Congress of Allied Health in Elsinor, Denmark.

- **Charles L. Puckett, M.D.**, professor and chief of plastic and reconstructive surgery, was elected director of the American Board of Plastic Surgery.

- The Health Services Management Alumni Association is planning its 1988 Fall Institute for Sept. 22-23. The institute will focus on "Dimensions of Quality" and will feature speakers of national prominence. Details about registration can be obtained from Judy Renner, administrative assistant, Health Services Management Program, 324 Clark Hall, 882-6178.

- The Department of Health and Human Services' Division of Associated and Dental Health Professions has awarded $54,693 to support academic and curricular activities of the graduate program in Health Services Management. **Gordon D. Brown, Ph.D.**, director, is the principal investigator.

- The Health Services Management Alumni Association's scholarship endowment fund-raising campaign has recorded pledges totalling $70,000. Contributions will be used to establish an endowed scholarship for the graduate program, which expects to award the first scholarship this fall.

- The peritoneal dialysis nursing staff won several awards at the 19th National Symposium of the American Nephrology Nurses Association in April. **Barbara Prowant, Lois Schmidt, Zbylut Twardowski, Cheryl Briebel, LaVonne Burrows, Leonor Ryan** and **Roberta Satalowich** won the first prize in the annual research writing contest for their manuscript "A randomized prospective evaluation of three procedures for peritoneal dialysis catheter exit site care."

  The Central Missouri ANNA Chapter won the Shiley Regional Chapter Award. Ms. Prowant received the Nephrology Research Award, and Ms. Schmidt received the Clinical Practice Award.

- The following faculty in the Department of Family and Community Medicine were featured at the annual meeting of the Society of Teachers of Family Medicine held in Baltimore in April: **Gerald T. Perkoff, M.D.**, Curators Professor and associate chairman; **Robert L. Blake Jr., M.D.**, associate professor; **John K. Glenn, Ph.D.**, associate professor; **Michael Hosokawa, Ed.D.**, professor; **Steven C. Zweig, M.D.**, assistant professor; **Brenda McSherry, R.N., M.S.N.**, clinical instructor; and **Harold A. Williamson Jr., M.D.**, assistant professor. Preceding the meeting, Dr. Williamson and **Coleen H. Kivlahan, M.D.**, clinical assistant professor and associate director of the State Department of Health, were featured at the Robert Wood Johnson Foundation's Fellows Day Conference.

The
1988
Presidential
campaign
has
begun.
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legislators
are in heated
contests.
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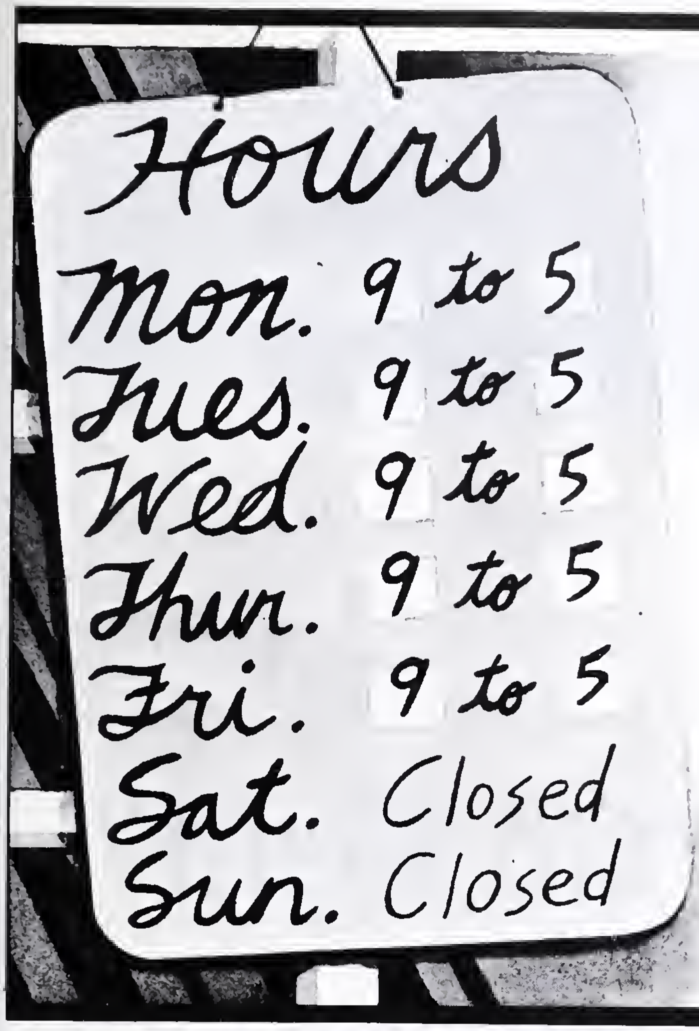
to vote in
the national,
state & local
elections
this November.



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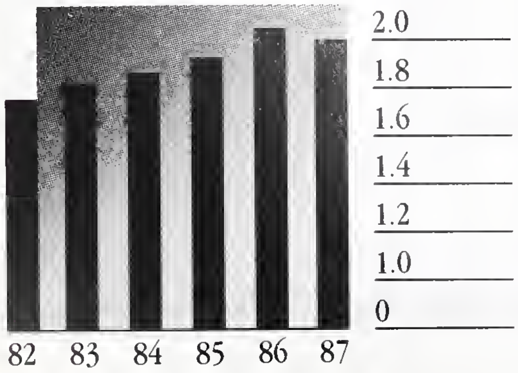

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In Memoriam

■ **Louis N. Berard, M.D.,** died May 30, 1988 at the age of 82. Dr. Berard, a urologist, practiced medicine in St. Louis for more than 50 years before his retirement in 1986. He was a lifelong resident of St. Louis and was a former chief of surgery at St. Mary's Health Center in Richmond Heights. He obtained his medical degree in 1934 from the St. Louis University Medical School. Dr. Berard was a member of the St. Louis Metropolitan Medical Society.

■ **Maurice A. Diehr, M.D.,** died July 19, 1988 at the age of 86. Dr. Diehr, a surgeon, opened his first practice in St. John's and moved it to Overland in the mid-1950s. He retired in 1975. He served as a lieutenant commander in the Navy in the Pacific in World War II. He obtained his medical degree in 1930 from Washington University. Dr. Diehr was a member of the St. Louis Metropolitan Medical Society.

■ **Glen H. Garrett, M.D.,** died June 27, 1988 at the age of 72. Dr. Garrett, an otolaryngologist, practiced medicine in Columbia for 37 years before his retirement in 1985. He was a member of the Boone Hospital Center staff until his retirement and had served as a consultant for the University of Missouri Student Health Service since 1948. He obtained his medical degree in 1940 from the University of Kansas Medical School. Dr. Garrett was a member of the Boone County Medical Society.

■ **Merritt L. Gentry, M.D.,** died May 17, 1988 at the age of 80. Dr. Gentry, a general practitioner, obtained his medical degree in 1934 from the Baylor College of Medicine. Dr. Gentry was a member of the Greene County Medical Society.

■ **Phillip S. Gifford, M.D.,** died June 20, 1988 at the age of 29. Dr. Gifford, an internal medicine specialist, obtained his degree in 1983 from the University of Missouri-Kansas City. Dr. Gifford was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Paul H. Grubb, M.D.,** died July 23, 1988 at the age of 72. Dr. Grubb, a general practitioner, practiced medicine in Galena, Kansas from 1948 until 1959. He later moved his practice to Joplin before retiring in 1984, after 38 years of service. He served in the U.S. Army Air Corps from 1942 to 1948. During his practice, he was the company doctor for Spencer Chemical Company, Vickers, King Press, Georgia Pacific and Eagle Picher. He obtained his medical degree in 1945 from the University of Kansas School of Medicine. Dr. Grubb was a member of the Jasper County Medical County Medical Society.

■ **Morris Herman, M.D.,** died May 27, 1988 at the age of 80. Dr. Herman, a surgeon, practiced medicine at Lutheran Medical Center in St. Louis for more than 40 years. He taught at the Lutheran Medical Center School of Nursing. In World War II he was a major in an Army medical detachment in Europe. He wrote a book on the evacuation of military personnel from mountainous terrain. He obtained his medical degree in 1936 from the Medical Facility, University of Zurich. Dr. Herman was a member of the St. Louis Metropolitan Medical Society.

■ **Louis F. Howe, M.D.,** died July 15, 1988 at the age of 84. Dr. Howe, a family practitioner, began practicing medicine in Union in 1932. After serving as a captain in the Army Air Force in the European Theater in World War II, he opened a practice in Brentwood. He retired in 1970. He obtained his medical degree in 1929 from the St. Louis University School of Medicine. Dr. Howe was a member of the St. Louis Metropolitan Medical Society.

■ **Rafael M. Millangue, M.D.,** died May 21, 1988 at the age of 46. Dr. Millangue, a general surgeon, practiced medicine in St. Louis. He obtained his medical degree in 1964 from Centro Medical College, Manila. Dr. Millangue was a member of the St. Louis Metropolitan Medical Society.

■ **Frank A. Palazzo, M.D.,** died June 21, 1988 at the age of 70. Dr. Palazzo, a neurosurgeon, served on the staff at St. Mary's Health Center in St. Louis for 37 years. He was also on the staffs of St. Anthony's Medical Center, Deaconess and Cardinal Glennon hospitals, St. John's Mercy Medical Center and the old Firmin Desloge Hospital. He had a private practice in Richmond Heights from 1971 until his retirement in 1987. He obtained his medical degree in 1943 from the St. Louis University Medical School. Dr. Palazzo was a member of the St. Louis Metropolitan Medical Society.

■ **James H. Spraul, M.D.,** died June 9, 1988 at the age of 56. Dr. Spraul, an occupational physician, served as the senior occupational physician at Monsanto's world headquarters in Creve Coeur from November 1975 until the time of his death. Before that, he was the medical director from 1967 until 1975 at NASA's Marshall Space

Continued on page 614

Continued on page 614

Flight Center in Huntsville, Alabama. He obtained his medical degree in 1957 from the University of Cincinnati Medical School. Dr. Spraul was a member of the St. Louis Metropolitan Medical Society.

■ **Gloria E. Viamontes, M.D.,** died June 23, 1988 at the age of 59. Dr. Viamontes, a psychiatrist, was born in Las Villas, Cuba. She came to the United States in 1964, becoming a citizen in 1969. She had served as supervising psychiatrist at St. Louis State Hospital and for the past six years was in private practice in Creve Coeur. She had been a lecturer in psychiatry at St. Louis University from 1976 until her retirement in 1987. She obtained her medical degree in 1948 from the University of Havanna in Havanna, Cuba. After coming to this country, she attended Washington University and the Missouri Institute of Psychiatry at the University of Missouri-St. Louis. Dr. Viamontes was a member of the St. Louis Metropolitan Medical Society.

■ **Roland L. Wiggins, M.D.,** died June 8, 1988 at the age of 82. Dr. Wiggins, an internal medicine specialist, was well-known as a scholar, medical researcher and a civil rights activist. He obtained his medical degree in 1947 from Meharry Medical College in Nashville, Tennessee. He was a Fulbright Scholar in Paris from 1948 to 1950. He also served as president of the local NAACP in the 1950s and was the first black to file for a school board position in Columbia, MO. At that time he was active in promoting voter registration of blacks. Dr. Wiggins was a member of the Boone County Medical Society.

Heartland Seventh Annual Cancer Symposium

"Cancer Management Update: A Primary Care Prospective"

October 27, 1988
Heartland Health System
St. Joseph, MO
Holiday Inn
St. Joseph, MO

OBJECTIVE:
To increase awareness of new diagnostic and treatment modalities for the cancer patient.

APPROVED FOR:
5 CME's AMA Category 1A
5 prescribed CME's of ACFP
5 CEU's

KEYNOTE SPEAKERS:
Drew Winston
Associate Professor of Medicine
UCLA Medical Center
Specialist in Infectious Diseases
Victor Fainstein
Associate Professor of Medicine,
Dept. of Infectious Diseases
M.D. Anderson Hospital and
Tumor Insitute

AGENDA:

12:00 - 1:00 p.m.	Registration
1:10 p.m. - 2:00 p.m.	Fever of Unknown Origin
2:00 p.m. - 2:45 p.m.	Imaging Procedures In The Search Unknown Primaries
2:45 p.m. - 3:00 p.m.	Break
3:00 p.m. - 3:45 p.m.	Case Presentation, Panel Discussion
3:45 p.m. - 4:45 p.m.	Selected Topics in Pain Management
5:00 p.m. - 7:00 p.m.	Cocktails and Trip to Riverboat
7:00 p.m. - 8:00 p.m.	Spirit of St. Joseph Dinner and River Cruise Dinner Speech: Superinfection in the Immunocompromised Patient

Tour of historic St. Joseph for guests - Noon to 5:00 p.m.

COST:

For the participants: full day symposium, cocktails, meal and cruise	$95.00
For the guests: tour, cocktails, meal and cruise	$30.00

For further information contact: William Russell, Cancer Program Manager, 901 Robidoux, St. Joseph, MO, 64501 or call (816) 271-7520.

Heartland Health System

Physician's Recognition Awards

Sixty-four MSMA members qualified for the MSMA-AMA Physician's Recognition Award during May and June 1988.

The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Audrain

Kurt R. Knappenberger, *Mexico*

Barton

Thomas W. Carroll, *Lamar*

Boone

William D. Bradshaw, *Columbia*
George J. Fuchs, *Columbia*
Hun T. Lee, *Columbia*
Patrick A. Smith, *Columbia*
Mark E. Weaver, *Columbia*

Buchanan

James F. Conant, *St. Joseph*
Mario Decanini, *St. Joseph*
Charles K. Goeking, *St. Joseph*
Thanh-Huong T. Nguyen, *St. Joseph*
Edward M. Stevens, *St. Joseph*

Butler-Wayne-Ripley-Carter

Nazar Chand, *Poplar Bluff*

Cape Girardeau

K. Prabhakar S. Kamath, *Cape Girardeau*
Robert D. Velander, *Cape Girardeau*

Clay-Platte

Barry R. Cooper, *North Kansas City*

Cole

Alan L. Braun, *Jefferson City*
Robert H. Tanner, *Jefferson City*

Franklin-Gasconade-Warren

Thomas J. Mitchell, *St. Clair*

Greene

Robert H. Michaels, *Springfield*

Jackson

Timothy K. Burch, *Lee's Summit*

Jasper

Joseph M. Graham, *Joplin*

Jefferson

Walter T. Judge, *Crystal City*

Metro. Med-Greater Kansas City

William K. Barr, *Kansas City*
Calvin E. Beck, *Kansas City*
James E. Bickley, *Kansas City*
Robert E. G. Bidwell, *Kansas City*
Ramon V. Canent, *Kansas City*
Richard P. Charette, *Kansas City*
Guillermo Couchonnal, *Kansas City*
Alexander C. Davis, *Kansas City*
Susan E. Farrell, *Kansas City*
Steven T. Fogel, *Kansas City*
William J. Huse, *Kansas City*
Victoria L. Martin, *Kansas City*
Joseph C. Parker, *Kansas City*
Michele D. Raible, *Kansas City*
Stanley G. Shaffer, *Kansas City*
Janardana N. Sharma, *Kansas City*
Frederick N. Shuler, *Kansas City*
John M. Singleton, *Kansas City*
Suzanne S. H. Sword, *Kansas City*
Stanley D. Wells, *Kansas City*
Barry C. Wood, *Kansas City*

Ozarks

Sammuel M. Watts, *Aurora*
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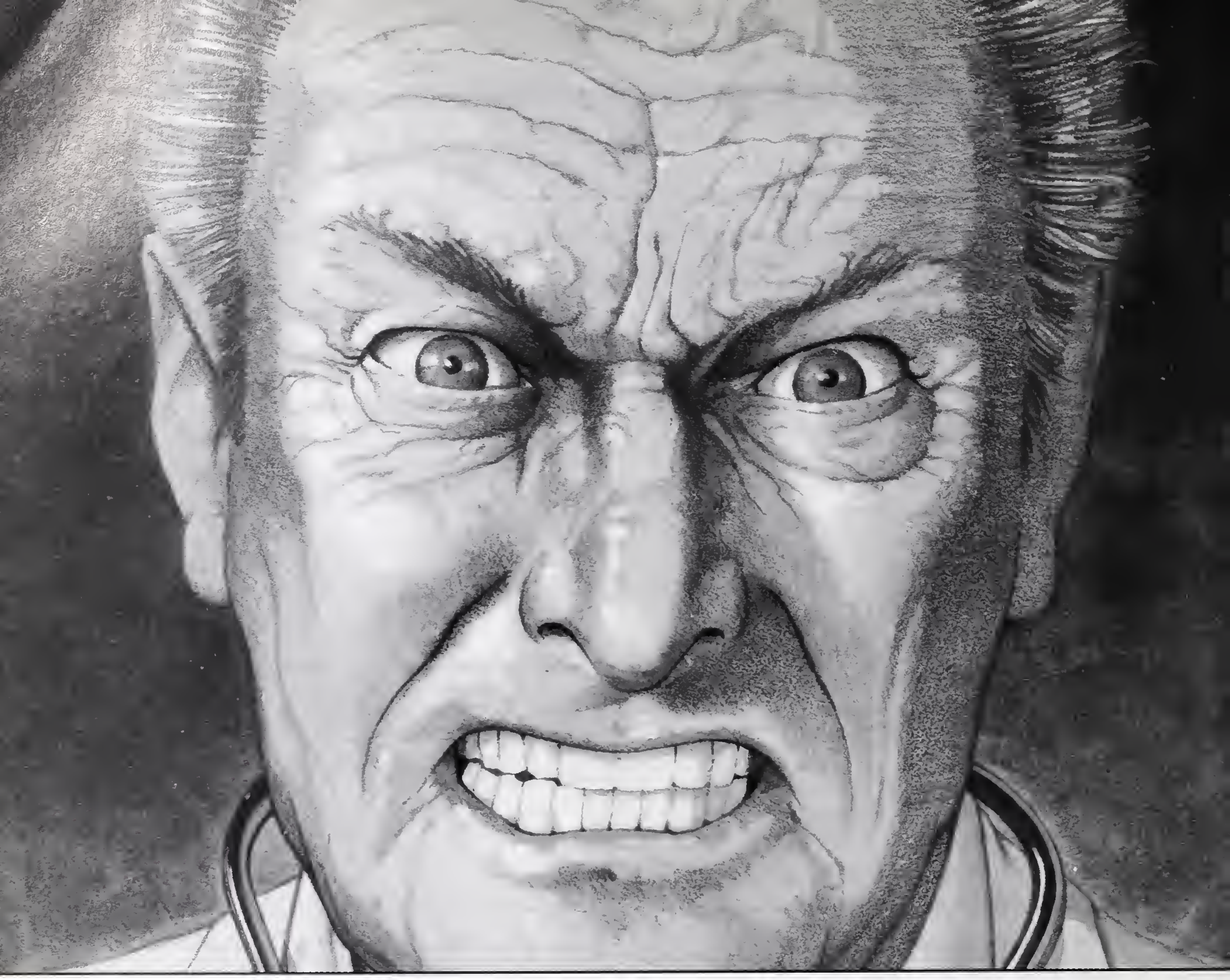

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ARMY RESERVE MEDICAL PROFILE NO.3

DALE L. TIPTON, M.D.

Associate Clinical Professor, Department of Otolaryngology, Head and Neck Surgery, University of California School of Medicine, San Francisco, California.
Chairman, Division of Otolaryngology, Franklin Hospital, San Francisco, California.
Lieutenant Colonel, U.S. Army Reserve.

EDUCATION University of California at Berkeley, A.B. Physiology; University of California School of Medicine, San Francisco, M.D. and Master of Science, Pharmacology.

RESIDENCY University of California School of Medicine, San Francisco: General Surgery — 2 years; Otolaryngology — 3 years.

FELLOWSHIPS National Institute of Health Fellow; Cancer Research Institute, University of California, San Francisco.

OUTSTANDING ACHIEVEMENTS Freshman Medical Student Research Award; Class President — 2nd year medical school; Student Body President — senior year medical school; Special Award by National Institute of Health to attend and present paper at International Congress of Otolaryngology in Tokyo, Japan; Chairman, Department of Otolaryngology, San Francisco General Hospital 1970-76; Chief of Medical Staff, Franklin Hospital 1982-84.

Dr. Tipton and residents examining post-operative patient in recovery room.

“I joined the Army Reserve shortly after completing my responsibilities as Chief of Staff of Franklin Hospital in San Francisco. I was intrigued with the idea of trying something different, such as Army Medicine.

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Brief Summary. Consult the package insert for prescribing information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h s after healing of an active duodenal ulcer The consequences of continuous therapy with Axid for longer than one year are not known

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists

Precautions: *General*—1 Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy

2 Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency

3 Pharmacokinetic studies in patients with hepatorenal syndrome have not been done Part of the dose of nizatidine is metabolized in the liver In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d , was administered concurrently

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations) The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats Pups reared by treated lactating rats had depressed growth rates Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers

Pediatric Use—Safety and effectiveness in children have not been established

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0 2%), urticaria (0 5% vs <0.01%), and somnolence (2 4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported, it was not possible to

Axid® (nizatidine, Lilly)

determine whether these were caused by nizatidine.

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo Rare reports of gynecomastia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients Rash and exfoliative dermatitis were also reported

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively

PV 2091 AMP   [041288]

Axid® (nizatidine, Lilly)

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September

14-15 **Endocrine Function and Aging** — Location: Clarion Hotel, St. Louis. Contact: Symposium Secretary, VA Medical Center, GRECC (111G-JB), St. Louis, MO 63125. 314/894-6510.

15-16 **The Second International Vaginal Surgery Conference** — Location: Adam's Mark Hotel, St. Louis, MO. Contact: Pat Daniels, Medical Administrator, St. John's Mercy Medical Center, 621 S. New Ballas, Suite 7011, St. Louis, MO 63141. 314/991-0441.

16-17 **Nd:YAG Laser Workshop for Gynecologists** — Location: DePaul Health Center, St. Louis, MO. Contact: Marlene Malkin, Department of Educational Services, DePaul Center, 12303 DePaul Drive, St. Louis, MO 63044. 314/344-7275.

16-17 **Hemostasis-Thrombosis Update '88** — Location: St. Louis University Medical Center, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University Medical Center, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

16-18 **Advanced Trauma Life Support Provider Course** — Location: St. Louis University Medical Center, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

17 **Primary Rheumatology** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

23-24 **Immunology, Rheumatology and Allergy Symposium** — Location: Westin Crown Center, Kansas City, MO. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS. 913/588-4488.

28 **Update for the Primary Care Physician** — Location: Marriott Pavilion Hotel, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

October

1 **Bethesda Eye Institute Contact Lens Update 1988** — Location: Bethesda Eye Institute Auditorium, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

6-9 **Internal Medicine Symposium/ACP Scientific Meeting** — Location: Hilton Plaza Inn, Kansas City, MO. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS 66103. 913/588-4488.

7-9 **Microsurgery of Lumbar & Cervical Spine** — Location: St. Louis University Medical Center, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

13-14 **Skeletal Integrity in the Elderly** — Location: Doubletree at Corporate Woods, Overland Park, KS. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS. 913/588-4488.

14-15 **31st Annual Physicians Alumni Weekend** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

18-19 **"Alpha and Omega: Ethics at the Edges of Life"** — Location: Battenfeld Auditorium, University of Kansas Medical Center, Kansas City, KS. Contact: David Baldwin, University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS 66103. 913/588-4488.

21-22 **Gateway to New Frontiers in Oncology** — Location: Omni International Hotel, Union Station, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

27-29 **Society of Teachers of Family Medicine, Regional Conference** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

28-29 **Pulmonary Medicine in Primary Care** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

November

3-4 **Pediatric Advanced Cardiac & Trauma Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis. Contact: Virginia Eason, Cardinal Glennon Children's Hospital, 1465 S. Grand, St. Louis, MO 63104. 314/577-5657.

5 **Cardiology Update** — Location: Marriott Pavilion Hotel, St. Louis. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

11-13 **Psychiatry Legal Environment: Medicine's Response** — Location: Hotel DelCoronado, San Diego, CA. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

18-19 **Obstetrics Update 1988** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

Omaha Mid-West
Clinical Society

56th Annual
Postgraduate Assembly

November 3, 4, and 5, 1988

Red Lion Inn
Omaha, Nebraska

For Information Contact:

Lorraine Seibel
Omaha Mid-West Clinical Society
7363 Pacific Street, Suite 205-B
Omaha, Nebraska 68114
(402) 397-1443

27-Dec. 2 **74th Scientific Assembly of the Radiological Society of North America** — Location: McCormick Place Convention Center, Chicago. Contact Merle Hedland, Director of Scientific Meetings, Radiological Society of North America, 1415 22nd Street, Tower B, Oak Brook, IL 60521. 312/571-2670.

December

9-10 **Epilepsy: An Update** — Location: Omni International Hotel, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

1989

January

19-21 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Eason, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

29-Feb. 3 **Aggressive Management of Your Retirement Plan and Valuation of Your Practice** — Location: Virgin Grand Beach Hotel, St. John, Virgin Islands. Contact: James H. McCray, DDS, MAGD, seminar coordinator, Professional Education Society, 231-B Flamingo Road, Mill valley, CA 94941. 1/800-872-3070.

February

23-25 **9th Annual Conference on Peritoneal Dialysis** — Location: Loews Anatole Hotel, Dallas, TX. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

24-27 **Advanced Cardiac Life Support Provider Course** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

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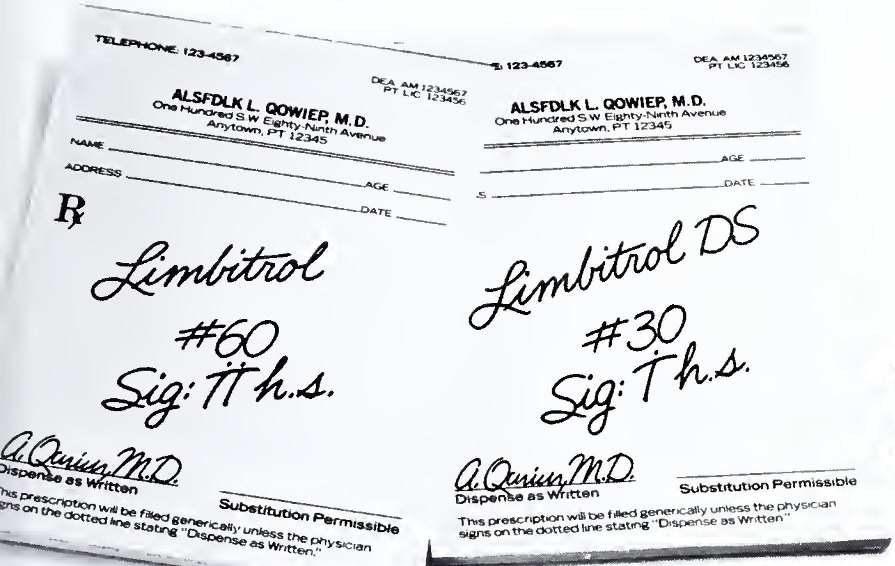

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NAME
ADDRESS
AGE
DATE

℞

Limbitrol
#60
Sig: ii h.s.

A. Quiun, M.D.
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Substitution Permissible

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123-4567

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Anytown, PT 12345

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#30
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Substitution Permissible

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Protect Your Prescribing Decision: Specify "Do not substitute."

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓒ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓒ

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

Limbitrol® Ⓒ
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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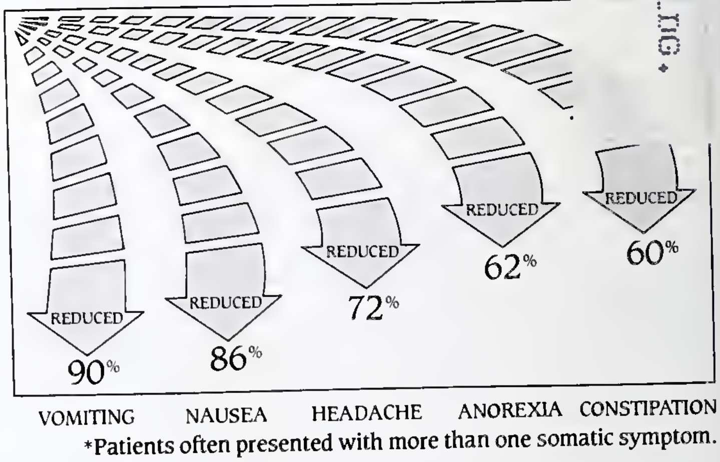

*Patients often presented with more than one somatic symptom.

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

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Missouri Medicine

Journal of the Missouri State Medical Association

October 1988

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- Batting .1000 with Baseball Cards
- The Expanding Scope of PRO Review
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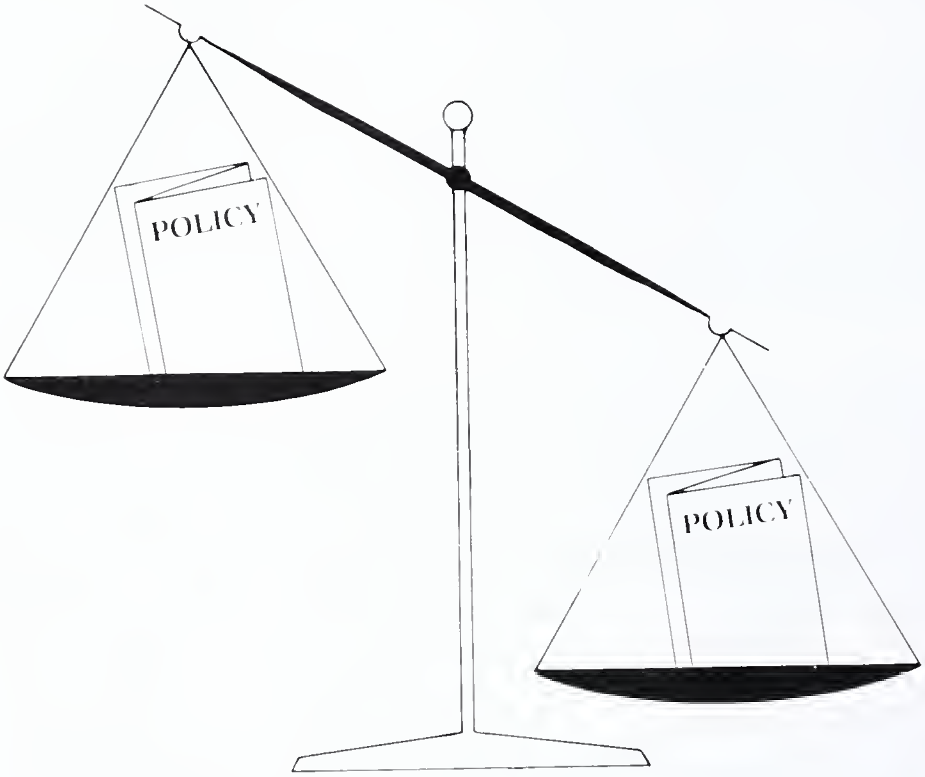

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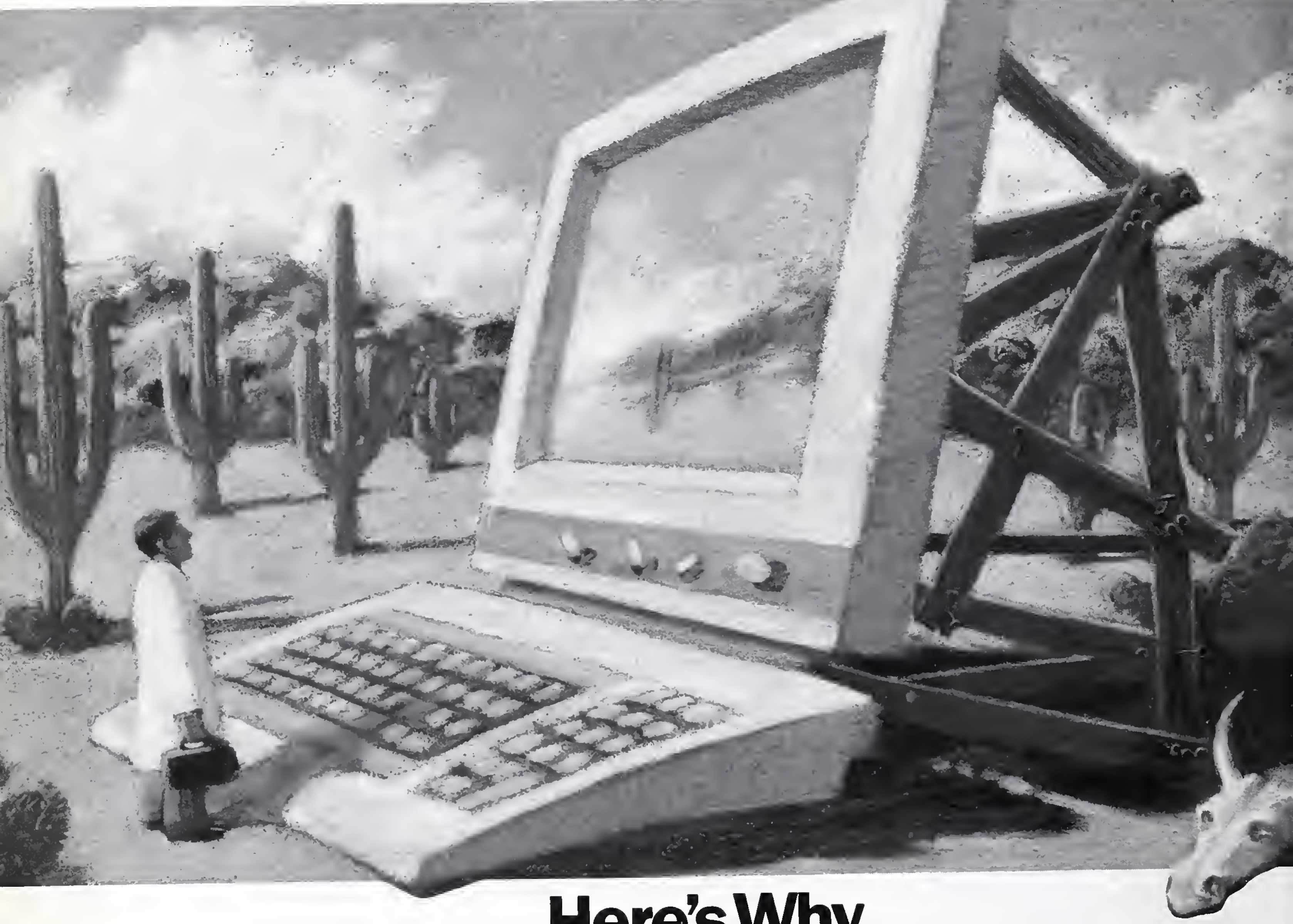

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October 1988

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NHLBI reports on high blood pressure

The National Heart, Lung, and Blood Institute (NHLBI) has available *The 1988 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure.* The report was recently released by the coordination committee of the National High Blood Pressure Education Program, which is sponsored by the NHLBI. This is the fourth in a series of reports which updates professionals on therapy recommendations.

The new report translates the latest clinical trials to medical practice; addresses the needs of special populations; examines factors that influence the cost of care; and provides additional guidelines for managing high blood pressure in the presence of cardiovascular diseases and other coexisting medical conditions.

A copy of the report may be obtained free of charge by contacting: The National High Blood Pressure Education Program Information Center, 4733 Bethesda Avenue, Suite 530, Bethesda, MD 20814 or call 301/951-3260. ■

Roche Labs launches program for pregnant women using Accutane

Hoffmann-La Roche has announced that it plans to pay for contraception counseling and the initial pregnancy test performed by a consulting physician for any woman using Accutane, a drug used to treat the most severe form of cystic acne, severe recalcitrant cystic acne. Roche will also provide physicians with a consent form for patients to sign before Accutane is prescribed, and will set forth strict criteria for prescribing Accutane.

These actions are part of a new program developed in cooperation with the Food and Drug Administration (FDA) and the dermatology community to reemphasize long-standing warnings that due to the risk of severe birth defects, Accutane must not be used by women who are pregnant while undergoing treatment.

The program has three critical goals: to limit the use of Accutane in women of childbearing potential to those with severe disfiguring cystic acne that is recalcitrant to standard therapies; to reiterate the need to exclude the use of Accutane by women who are pregnant or who may become pregnant while undergoing treatment, and to ensure that women of childbearing potential use effective contraceptive measures while taking Accutane.

Roche will immediately implement new labeling on Accutane, along with its other actions. In addition, Roche is offering a Pregnancy Prevention Program Kit for Women on Accutane. The Pregnancy Prevention Program kits were delivered by Roche sales representatives to all dermatologists and other identified Accutane prescribers nationwide on September 19, 1988. ■

Drug Utilization Review Committee created

A Drug Utilization Review (DUR) Committee of physicians, pharmacists, and other professionals has been formed to be responsible for informing physicians about drug utilization within the Missouri Medicaid program, current cost factors and constraints, and for establishing guidelines for appropriate use of drugs under the program.

Histamine^2 Receptor Antagonists — Tagamet®, Zantac®, and Pepcid® were the first drugs to be reviewed by the committee. According to the report, these drugs are consuming nearly 10% of the total dollars reimbursed for *all* Missouri Medicaid Formulary drugs each month. These drugs have also accounted for an average of 10,000 prescriptions each month thus far in 1988 and have increased in average prescription cost almost every month for the past 19 months from $38.65 (January, 1987) to $46.91 (August, 1988) even though the average prescription quantity has decreased from 76.55 to 65.70 during the same time frame.

While only 7% of Missouri's eligible 323,600 Medicaid recipients live in nursing homes, they consume almost 50% of the total dollar outlay for this group of drugs each month.

In the review of the H^2 antagonists, the Committee found that many recipients are on therapeutic dose regimens, many for unapproved conditions, and for periods that exceed package labeling and recommended guidelines. One solution to the potential problem of misuse for excessive use of these drugs is to assure that the use of the drugs is properly prescribed and monitored. Constant re-education about the proper use of the drugs and daily incorporation of critical drug regimen review and risk, benefit and cost assessments within individual practices is necessary.

Suggested guidelines might include limiting full dose therapy for peptic ulcer disease to 4 to 8 weeks and consider single bedtime dosing regimens which may have the same healing rates as divided dose regimens; limiting outpatient prescriptions to 1 or 2 refills, and limit nursing home orders to 8 weeks only to assure proper follow-up with the physician and to eliminate potential abuse or unnecessary refills; and using only bedtime dosing for prophylactic regimens, unless a hypersecretory diagnosis has been confirmed, and avoiding concurrent use of different H^2 antagonists.

The alternative to practitioners' self-monitored prescribing is to implement Medicaid Program restrictions/deletions. The DUR Committee is in favor of the self-monitored approach. One of the DUR Committee's major goals is to maximize the finite resources available for the Medicaid drug program to better serve a growing population and allow the availability of new drugs that may improve the physician's ability to deliver care. ■

DOH recommends new Meningitis vaccine

The Missouri Department of Health is advising that all children 18 to 23 months old be vaccinated with the new Haemophilus b conjugate vaccine to prevent bacterial meningitis and other serious diseases. Children between two years and five years old who attend day care centers or are at high risk for Haemophilus b (Hib) disease should also be immunized.

Missouri was cited as one of the states where the old vaccine was less effective than in other parts of the country. In Los Angeles it was rated as 74% effective while Missouri figures indicated that its effectiveness was **minus** 29%. Studies show that the new vaccine is more effective and the Immunization Practices Advisory Committee is recommending that all children be given the new Hib vaccine at 18 months of age. There is no need to routinely revaccinate children who received the old vaccine at 24 months of age or older.

Studies suggest that the risk of acquiring primary Hib disease for children less than five years of age appears to be greater for those who attend day care facilities than for those who do not. Children under five years of age comprise the major group at risk for Hib disease, with the six to 12 month age group being at highest risk. Approximately 35% to 40% of Hib disease occurs among children 18 months of age or older.

The DOH has purchased and is now distributing the new Haemophilus b conjugate vaccine to local county health departments. This vaccine was licensed by the FDA in December 1987 to replace the original vaccine developed in 1985. ■

Legal Expense Fund Law Changed

The Legal Expense Fund Law, 105.711 RSMo 1987, was amended by the 1987 General Assembly to address Missouri's crisis in liability insurance for obstetrical care. The legislation was intended to provide medical liability protection for those physicians who provide obstetrical or child care services under contract with a local health department for no or minimal compensation.

The Department of Health, in agreement with the Attorney General's office and the Office of Administration has defined "minimal compensation" and provided a standard contract for use between physicians and local health departments.

Prior definition: "Minimal compensation" was defined in September, 1987, as no more than $40.00 per hour for clinic services or 85% of the current Medicaid fee for specific services.

The "85%" definition has created problems. Few private physicians have decided to participate. As of August 1, 1988 there were only about 28 contracts with local health departments approved by DOH. This is out of a total of more than 200 private physicians who contract for services. It should be noted that about 174 salaried resident physician contracts from Truman Medical Center in Kansas City have been approved.

Also, expanded numbers of Medicaid eligible pregnant women and children since January, 1988 have resulted in a much different picture compared to when the law was passed. With the Medicaid expansion, a definition of "minimal" as *less* than Medicaid is no longer appropriate to recruit adequate numbers of providers.

New definition: DOH, in discussions with numerous others, has determined that the "85% of Medicaid" needs to be increased to 100%. The Attorney General's Office has confirmed in a letter that DOH has the authority to define minimal compensation.

Therefore, effective immediately, "minimal compensation" is defined as 100% of the reimbursement provided under the Medicaid fee-for-service schedule or up to $40.00 per hour.

Any contracts in effect should be amended accordingly. For further information, contact DOH General Counsel, Robert Northcutt at 314/751-6005. ■

MSMA Council Meeting Summary August 27, 1988

The MSMA Council met August 27 at the Capitol Plaza Hotel in Jefferson City. Highlights of the meeting include:

- The council approved the

report of the Committee on Legislative Affairs that outlined the actions taken on Resolutions referred to the Committee from the MSMA House of Delegates. Actions taken on the Resolutions are as follows:

Resolution #9 — AIDS: It was felt the recently-passed AIDS legislation satisfied the intent of this resolution.

Resolution #11 — Medicare Mandatory Assignment — The Committee stated that MSMA should continue to oppose mandatory assignment.

Resolution #20 — HMO "Warning Labels" — No recommendation was made pending additional information.

Resolution #21 — Unregulated Insurors — No recommendation was made pending additional information.

Resolution #30 — AIDS testing in Hospitals — Since the aims of this resolution run counter to recommendations of the AMA, the President's Task Force on AIDS, the C.D.C. and the Missouri Department of Health, the Committee recommended Resolution 30 not be adopted.

Resolution #31 — Resident Physician Workloads — The Committee decided to await the report of a special committee of the AMA that is studying this subject nationwide.

- Dr. Jack Croughan, Medical Director of the PHP, gave the report of the Physicians' Health Program Committee which outlined four recommendations for the Council. The first recommendation was that the MSMA approve the Physicians' Health Program Policy and Procedure Manual. The report also recommended that the MSMA approve the services of the Physicians' Health Program being made available to non-members of the MSMA; that MSMA write-off the $11,500 in outstanding charges that have accrued in fiscal year 1987; and that MSMA approve the revisions of the *Statement of Relapse* adopted on May 8, 1987.

After brief discussion of the recommendations, the Council took the following actions: (1) the Council agreed to take action on the MHPC Policy and Procedure Manual at the December Council Meeting. (2) The Council referred the matter of PHP services being made available to MSMA non-members to the Executive Committee for further study and its implication on our bylaws. (3) The recommendation regarding the write-off of $11,500 outstanding charges was referred to the Budget and Finance Committee for further study to determine if any of these charges might be recovered. (4) Approval of the revisions of the Statement of Relapse adopted on May 8, 1987 was postponed until the December Council Meeting to allow ample time for study. The Council accepted the entire PHP Council report.

Dr. Croughan also informed the Council that the PHP now has a new phone number for individuals seeking information or making a referral to the program. The number is 314/768-4990. This number, along with committee members and their respective phone numbers, will be publicized regularly in *Missouri Medicine.*

- In the Report of the Executive Vice President, Royal Cooper reported that the Third Annual HMSS meeting is being planned for January 28-29, 1989 at the Ramada Inn, Jefferson City. Dr. Howard Lang, Chairman of the AMA-HMSS, will be the keynote speaker at the January 28-29 meeting.

Other points made include:

Mr. Cooper informed the Council that the AMA informed MSMA that beginning in September physicians may apply for a Physicians Recognition Award valid for one year, two years or three years. The AMA is making this change due to reporting requirements of certain state licensure boards.

MOMEDICO was structurally changed to a holding company called MOMED; now MOMED owns MOMEDICO, and MOMED can do other for-profit activities. The Council voted to transfer our MOMEDICO stock for stock in the holding company, and to renew its subordinated debenture for a three-year period. Dr. Bradley, MOMEDICO president, presented the MSMA with a check for $13,290 to be used for activities of the Physicians Health Committee.

The Resource Based Relative Value Scale (RBRVS) is behind schedule. It will be available for distribution in late September and we can then begin to meet with AMA in late October or early November. The RBRVS needs to be discussed by the AMA House of Delegates during its December meeting. Although the AMA has been involved in this from the beginning, it has in no way endorsed or approved RBRVS as a payment mechanism for physicians serving under Medicare.

- The Council approved holding the 1992 annual convention April 8-12, at the Adam's Mark Hotel in St. Louis.

Mr. Cooper stated that the majority of the recommendations from the MSMA Strategic Plan have been referred to various commissions and committees for study and implementation.

The AMA is actively pursuing the "medically unnecessary" provisions of OBRA. HCFA has not released criteria regarding their medically unnecessary provisions. AMA will also seek appropriate legislative relief. If legislative or administrative relief is not forthcoming, judicial relief will be explored. General American recently sent a mailing on the program to all physicians.

- In the Councilor District Report from District No. 3, Dr. William Huffaker reported that Dr. Frank Lieb, an AMA delegate for almost seven years, has accepted a position with CIGNA in Hartford, CT and has resigned his delegate position. Dr. Robert MacDonald, Jr., was appointed to fill the delegate vacancy created by Dr. Lieb's resignation. Following the appointment of Dr. MacDonald to AMA Delegate, Dr. Jo-Ellyn Ryall was appointed an AMA Alternate Delegate.

- In the District No. 7 report, the Council was informed that the Metropolitan Medical Society of Greater Kansas City is sponsoring a leadership conference on November 17 with Dr. Alan Nelson, President-Elect of the AMA as featured speaker.

Dr. O'Hearn is sponsoring a support group for physicians and their families who have experienced or are currently involved in malpractice cases. MOMEDICO is assisting in the sponsorship of this service.

- In District No. 8, Dr. Hall reported that his district held seven luncheons prior to the August primaries to meet all candidates running for the 7th Congressional District in Southwest Missouri. Mr. Hancock is the Republican and Mr. Bacon the Democratic candidate.

Dr. Hall also reported that three residents have begun their family practice residencies at Cox Medical Center in Springfield.

- Dr. George Bohigian presented a report on the AMA. He reported that all six resolutions introduced by the Missouri delegation at the AMA Annual Meeting were passed.

He suggested that MSMA resolutions on the following three topics be introduced at the AMA Interim Session of the House of Delegates: (1) Relative Value Scale study; (2) The effect of AMA direct membership vs AMA membership through the State Society; (3) Ask the AMA Board of Trustees for a report on their efforts to enhance the dissemination of scientific information to the public and to physicians.

Dr. Bohigian also reported that Dr. Hugh Stephenson was elected to the AMA Council on Medical Education and Dr. Anthony Griffin was elected to the AMA Committee on Constitution and Bylaws.

- Dr. A. J. Campbell, Counselor Advisor for the Commission on Medical Economics, reported that the Commission studied referrals of various items from the MSMA Strategic Plan by the Council to their Commission. Due to the length of the report, if you would like further information, contact the MSMA office at 314/636-5151.

- Dr. William Bradshaw gave the report on the Commission on Continuing Education and Health Manpower. In his report, he stated that during a phone conference held on August 22, there was considerable discussion regarding the topic for the MSMA Opening General Session during the 131st Annual convention, April 13-16, 1989, Marriott's Pavilion Hotel, St. Louis. The Commission recommended that MSMA consider "Implications of Resource-Based Relative Value Schedule for Missouri Physicians" as a topic for the Opening Session.

The Commission also recommended that the MSMA approve the following organizations as sponsors for continuing medical education activities: Lee's Summit Community Hospital, Greene County Medical Society and Incarnate Word Hospital.

The Council approved both of the reports.

- Dr. H. Peter Ekern, Mexico, Chairman of the MSMA Building Committee gave the report of the MSMA Building Committee. The Committee recommended that B. D. Simon Construction, Columbia, become the contractor for the remodeling at 113 Madison and the renovation of 115 Madison. The Council approved the recommendation.

- Mr. Gary Passmore, Consultant to the Committee to Preserve Health Care and Consultant to MSMA for the Medicaid survey, submitted the report of the Committee's meeting on July 14 then proceeded to report on the Medicaid Survey. Mr. Passmore reported that 850 completed surveys out of 2350 mailed were received. He presented a lengthy overview of the survey and background information on the development of the questionnaire. The following summary of major findings, recommendations and the proposed Action Plan was then presented to the Council. A complete copy of the survey results is available from the MSMA Office. Turn to page 659 of this issue for a detailed summary of the report. An Action Plan was outlined regarding press conferences on September 15-18 in the state and a presentation to legislators October 20-November 1.

- Dr. T. J Cooper, Chairman of the Task Force to Plan Voluntary Acceptance for Low-Income Medicare Patients, reported to the Council regarding the Task Force Meeting held on July 9. Following lengthy discussion on the Task Force's recommendations, the Council instructed the Task Force to finalize the project. This report will then be sent to the Council along with a mail ballot seeking the Council's approval or disapproval of this project. The Vice-Councilors will receive a copy of the report.

- With regard to MedAssist, the Council, by written ballot, disapproved the expenditure of $50,000 for the MedAssist Program campaign.

- The Council recommended that Dr. Fred Peterson be reappointed and Dr. Jerry Murrell be appointed to serve on the Board of the Missouri Patient Care Review Foundation.

- Dr. Dyer appointed the following Committee on Arrangements — Dr. William Huffacker, Chairman; Drs. Carol Williams and Arturo Montes.

- With regard to the Missouri

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Lower Respiratory Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Haemophilus influenzae*, *Haemophilus parainfluenzae*, and *Streptococcus pneumoniae*.

Skin and Skin Structure Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Proteus mirabilis*, *Proteus vulgaris*, *Providencia stuartii*, *Morganella morganii*, *Citrobacter freundii*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis*, and *Streptococcus pyogenes*.

Bone and Joint Infections caused by *Enterobacter cloacae*, *Serratia marcescens*, and *Pseudomonas aeruginosa*

Urinary Tract Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Serratia marcescens*, *Proteus mirabilis*, *Providencia rettgeri*, *Morganella morganii*, *Citrobacter diversus*, *Citrobacter freundii*, *Pseudomonas aeruginosa*, *Staphylococcus epidermidis*, and *Streptococcus faecalis*.

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni*, *Shigella flexneri*,* and *Shigella sonnei** when antibacterial therapy is indicated

*Efficacy for this organism in this organ system was studied in fewer than 10 infections

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin Therapy with Cipro® may be initiated before results of these tests are known, once results become available appropriate therapy should be continued As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance

CONTRAINOICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPRDFLDXACIN SHDULD NDT BE USED IN CHILDREN DR PREGNANT WDMEN The oral administration of ciprofloxacin caused lameness in immature dogs Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACDLDGY SECTIDN IN FULL PRESCRIBING INFORMATIDN)

PRECAUTIONS

General

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIDNS)

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided The recommended daily dose should not be exceeded Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DDSAGE AND ADMINISTRATIDN SECTIDN IN FULL PRESCRIBING INFORMATIDN).

Drug Interactions

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life This may result in increased risk of theophylline-related adverse reactions If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired, concurrent administration of these agents with ciprofloxacin should be avoided

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum This should be considered if patients are receiving both drugs concomitantly

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken

Information for Patients

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing Ciprofloxacin may cause dizziness or lightheadedness, therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination

Carcinogenesis, Mutagenesis, Impairment of Fertility

Eight *in vitro* mutagenicity tests have been conducteu with ciprofloxacin and the test results are listed below

- Salmonella/Microsome Test (Negative)
- *E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V_{79} Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed

Pregnancy – Pregnancy Category C

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPRDFLDXACIN, LIKE DTHER DRUGS IN ITS CLASS, CAUSES ARTHRDPATHY IMMATURE ANIMALS, IT SHDULD NDT 8E USED IN PREGNANT WDMEN (SEE WARNINGS)

Nursing Mothers:

It is not known whether ciprofloxacin is excreted in human milk, however, it is known that ciprofloxacin excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of th and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision sho be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to t mother.

Pediatric Use.

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (S WARNINGS)

AOVERSE REACTIONS

Ciprofloxacin is generally well tolerated During clinical investigation, 2,799 patients received 2,B6B courses the drug Adverse events that were considered likely to be drug related occurred in 7 3% of courses, possi related in 9 2%, and remotely related in 3.0% Ciprofloxacin was discontinued because of an adverse event 3.5% of courses, primarily involving the gastrointestinal system (1 5%), skin (0 6%), and central nervous syst (0 4%)

The most frequently reported events, drug related or not, were nausea (5 2%), diarrhea (2 3%), vomiti (2.0%), abdominal pain/discomfort (1 7%), headache (1 2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below Those typical quinolones are italicized

GASTRDINTESTINAL *(See above)*, painful oral mucosa, oral candidiasis, dysphagia, intestinal perforati gastrointestinal bleeding

CENTRAL NERVOUS SYSTEM. *(See above), dizziness, lightheadedness, insomnia, nightmares, halluci tions, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakne malaise, anorexia, phobia, depersonalization, depression, paresthesia*

SKIN/HYPERSENSITIVITY *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chi angioedema, edema of the face, neck, lips, conjunctivae or hands*, cutaneous candidiasis, hyperpigmen tion, erythema nodosum.

SPECIAL SENSES *blurred vision, disturbed vision, (change in color perception, overbrightness of light decreased visual acuity, diplopia, eye pain, tinnitus, bad taste*

MUSCULOSKELETAL *joint or back pain, joint stiffness*, achiness, neck or chest pain, flare-up of gout.

RENAL/URDGENITAL. *interstitial nephritis, renal failure*, polyuria, urinary retention, urethral bleedi vaginitis, acidosis

CARDIOVASCULAR palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pecto myocardial infarction, cardiopulmonary arrest, cerebral thrombosis

RESPIRATORY epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospas pulmonary embolism

Most of these events were described as only mild or moderate in severity, abated soon after the drug w discontinued, and required no treatment

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged investigators to be related to elevated plasma levels nf theophylline possibly as a result of a drug interaction w ciprofloxacin.

Adverse Laboratory Changes Changes in laboratory parameters listed as adverse events without regard to d relationship:

Hepatic – Elevations of ALT (SGPT) (1.9%), AST (SGDT) (1 7%), alkaline phosphatase (0 B%), LDH (0 4 serum bilirubin (0 3%)

Hematologic – eosinophilia (0 6%), leukopenia (0 4%), decreased blood platelets (0 1%), elevated bl platelets (0 1%), pancytopenia (0.1%)

Renal – Elevations of Serum creatinine (1 1%), BUN (0.9%)

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE 8EEN REPORTED

Dther changes occurring in less than 0.1% of courses were Elevation of serum gammaglutamyl transfera elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anem bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available In the event of acute overdosage, the stomach should emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given support treatment Adequate hydration must be maintained. In the event of serious toxic reactrons from overdosa hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if re function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours For patients w complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hou

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treat with 500 mg every 12 hours For more severe or complicated infections, a dosage of 750 mg may be given every hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours

In patients with renal impairment, some modification of dosage is recommended (SEE DDSAGE A ADMINISTRATIDN SECTIDN IN FULL PRESCRIBING INFORMATIDN)

HOW SUPPLIEO

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FDR CDMPLETE INFORMATIDN)

CONVENIENT *B.I.D.* DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
Respiratory Tract* Bone and Joint* Skin/Skin Structure*	Mild/Moderate	500 mg *B.I.D*
	Severe/Complicated	750 mg *B.I.D*
Urinary Tract*	Mild/Moderate	250 mg *B.I.D*
	Severe/Complicated	500 mg *B.I.D*
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg *B.I.D*

*** Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

For further information, contact the Miles Information Service: 1-800-642-4776. In VA. call collect: 703-391-7888.

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State Medical Foundation, Dr. Hahn reported that $134,500 in loans were awarded for 1988-89. This is much less than last year. Discussion was held regarding the high cost of medical education. The Council agreed to permit the Foundation to incorporate their two to three mailings a year with existing MSMA mailings. The Foundation will share postage costs with the Association.

- The next meeting of the Council will be held December 9-10, 1988 at the Capitol Plaza Hotel, Jefferson City. January's meeting will be held January 27, 28, 29, 1989. The Council will meet on January 27-28 and the HMSS meeting will be held January 28-29. ■

Singleton appointed

Governor Ashcroft in September appointed MSMA president-elect Marvin A. Singleton of Joplin to the Governor's Advisory Council on Aging. Dr. Singleton will serve for a two-year term. ■

Send your Citizenship Award nominations

MSMA is seeking nominations for the annual MSMA Citizenship and Community Service Award. This will be presented at the 1989 Annual Convention, April 13-16 at the Marriott Pavilion in St. Louis.

The award is designed to honor a civic-minded physician who has contributed significantly to the betterment of his or her community.

Nominations for the award should include a curriculum vitae and a one- or two-page statement of the nominee's qualifications for the award.

Nominations must be received by December 1, 1988. Send them to MSMA Headquarters, P.O. Box 1028, Jefferson City, MO 65102. ■

Resolutions sought for '89

Deadline for submission of resolutions for introduction before the 1989 Annual Convention is February 28, 1989.

MSMA members, component medical societies and medical students may introduce resolutions. Resolutions received by the deadline will appear in the convention delegates' handbooks.

Any resolution submitted after the deadline must be made available to the House of Delegates 24 hours before the session at which it is to be introduced.

The House must approve the introduction of late resolutions submitted for the second and third sessions at the Convention.

Introduction of a resolution at the second session requires a two-thirds majority approval of the House. Introduction at the final session requires unanimous approval in order to be presented.

The individual or society introducing a resolution after the February deadline is responsible for supplying enough copies of the document for all convention delegates. ■

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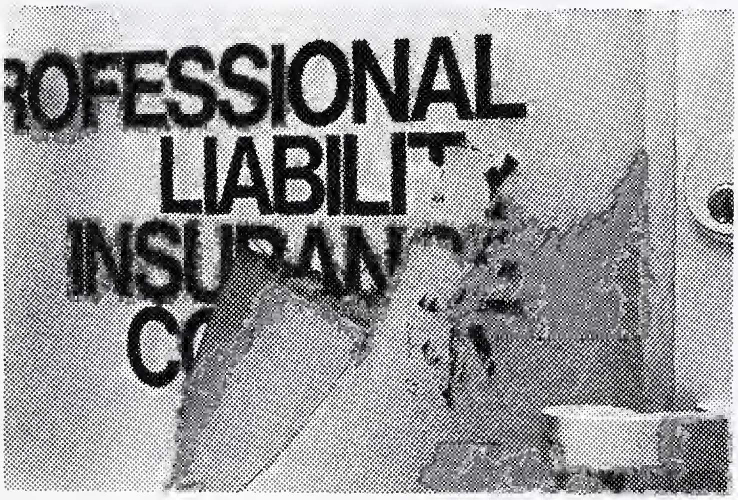

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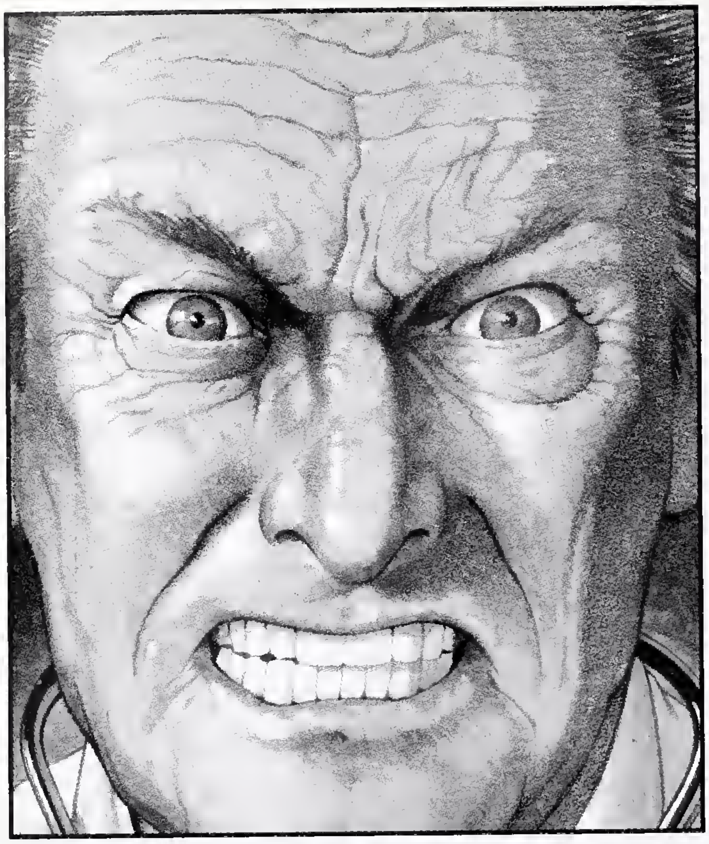

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EDITOR'S DESK

by Donald R. Germann, M.D.
Radiologist
member Missouri Medicine Editorial Board

The stories concerning unfortunate patients, administrative bungling and frustrated doctors could go on for pages.

Social Security — Ecuadorian Style

On March 11, 1988 I returned from a five-week assignment in Ecuador. I was sent there by the International Atomic Energy Agency to help the Social Security Hospital in Quito update and expand its nuclear medicine facility. A gamma camera and computer had been purchased with U.S. Foreign Aid funds and the funds were administered through the International Atomic Energy Agency. But this is not my story.

Quito is a beautiful city; physically, one of the nicest in the world. For people with dollars, living and shopping is inexpensive and the people of the country are delightful. This is not my story either.

Some 30 years ago (pardon my lack of specific dates) a Social Security system was established. It taxed the employee and employer very heavily (10-12%) each. However, this was total health care as well as retirement. In addition, workers could borrow, just once, from the fund to buy a home and loan repayment was at low interest rates. The service was very successful and a sizeable fund accumulated.

Five years ago the Quito Social Security Hospital was the wealthiest hospital in South America. Supplies were readily available; patients were well cared for; workers were buying homes, and the elderly were comfortable.

The government saw the funds increasing and they decided the money was needed for "other things." The Ecuadorian military needed building to provide protection against Peru, a nation with which they have had a longstanding border dispute. Roads in favorable spots needed improving, and the citizens tell me a lot of it was graft, political thievery. Apparently it was not possible for the Speaker of the House to get 55% royalty on his books in Ecuador, so he took other means for his rewards. The system was ripped off and sacked to zilch.

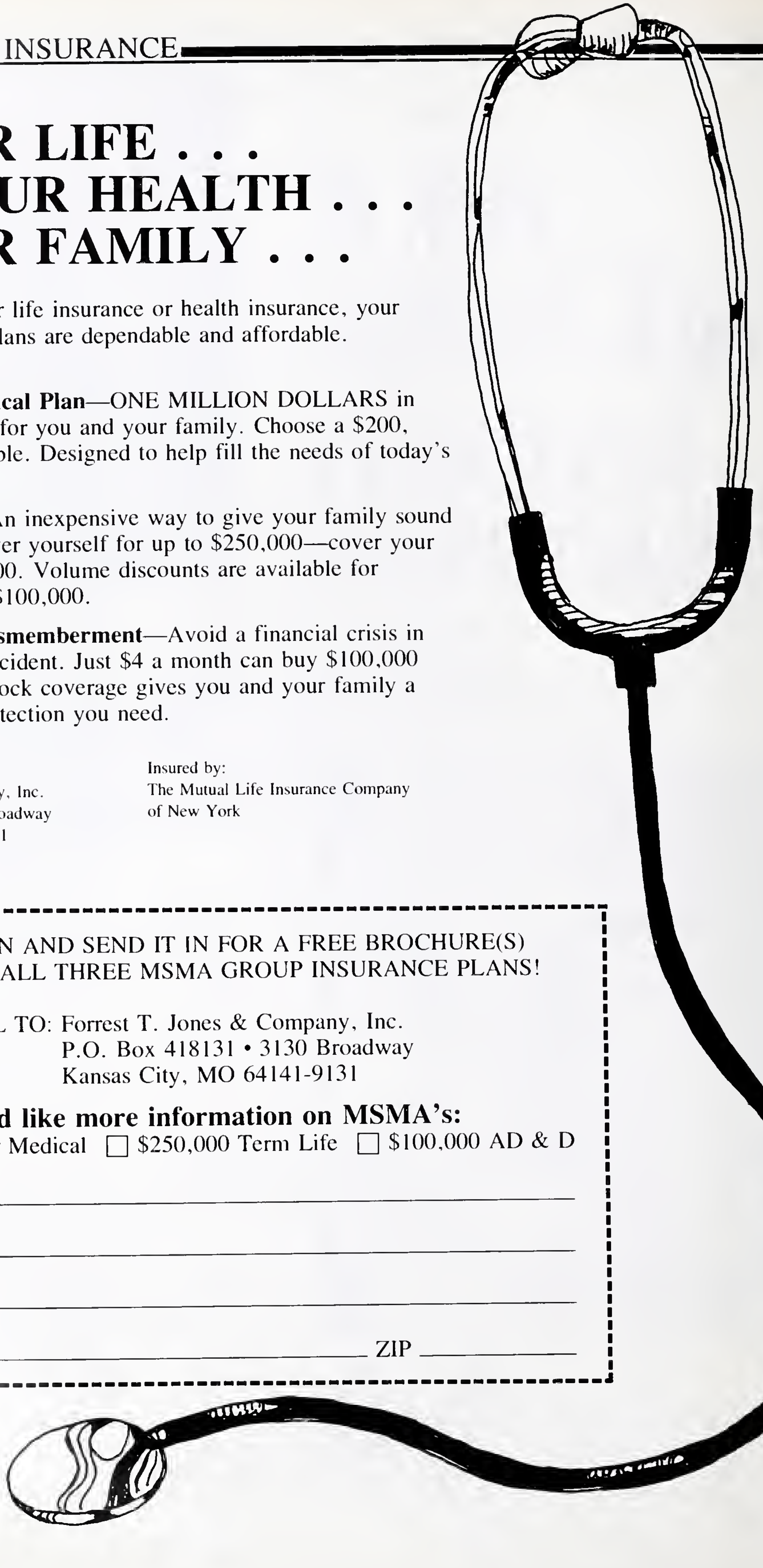
Today, the wealthiest hospital in Quito five years ago is flat broke. During my stay we had trouble getting adhesive tape, saline, needles and syringes. The house staff went on strike while I was there, not for increased pay but for back pay and, more important, for equipment maintenance. There was no functioning equipment in the intensive care unit. In nuclear medicine we could not do stress cardiac studies for there was no EKG for adequate stress monitoring. In fact, even routine stress EKG studies had been discontinued six months before I arrived.

The stories concerning unfortunate patients, administrative bungling and frustrated doctors could go on for pages.

It seems that any system, even a government one, if it is too successful, becomes a plum too nice to be let alone. It must be consumed. A few will profit; many will lose.

Of course, this could never happen here! A successful service would not be usurped by the semi-skilled or the administrative inept. Of course in the United States, Social Security is a sacred cow and even if a large pool of excess funds accumulate, as has been predicted, our government would never use them inappropriately.

Maybe there *is* a moral to this story. ■



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Auxiliary Message

by Jean Wankum
MSMAA Legislation
Chairman

*"The punishment of wise men who refuse to take part in government is to live under the government of unwise men." — **Plato***

Participate or perish

IT IS IMPORTANT! It is not something with which most physicians are familiar. It is frequently rewarding and stimulating. It is also demanding and frustrating. It is the political process!

The future of our medical profession and the American health care system it serves are dependent upon this political process. As a profession, we can either help shape this process or be shaped by it. Though there are many ways to participate in this process, the best way is to become involved. With the November election fast approaching, your involvement is needed now.

Just what can you do?

First, it is essential to understand that the political process is best affected by and through our elected officials. It is therefore critical that physicians become acquainted with their elected representatives, preferably when they are still candidates. Assistance during a campaign is rarely forgotten. Campaign participation can be done at arms length through financial contribution or more closely by actual campaign work. Recruitment of volunteers, distribution of campaign literature, hosting a reception in your home and introducing your candidate-friend to other community leaders are but a few ways this participation can be accomplished. Getting to know your representatives is important and them getting to know you is even more important. Your assistance in an actual election campaign is the best way to form political friendships.

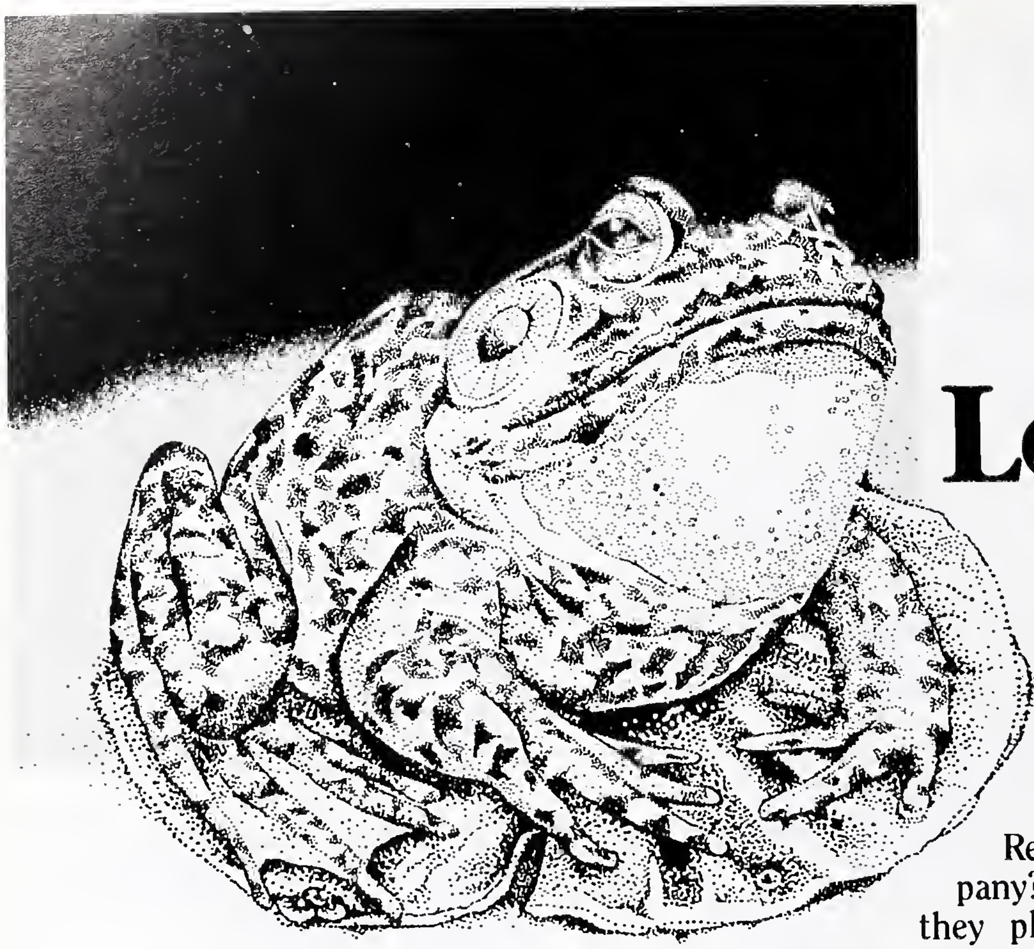
Secondly, don't forget to vote. Though this is so obvious, voter apathy is a fact of life in the American democratic system. In several recent elections, more than 60% of our population failed to vote. Physicians were well represented in that non-voting group as some studies have indicated that as many as 30% to 40% of the physician family population are not even registered! The November election deadline for voter registration is **October 19.** So register, vote, and then remind others to follow your example.

Thirdly, stay active. The process only begins with the election of our state and national representatives. Whether or not your particular candidate won, attempt to establish an ongoing relationship with those representatives and senators who did. Most elected officials will candidly admit that they frequently lack sufficient information about the issues before them. You can fill that void and be a resource to them. Offer your assistance and knowledge both in person when possible and by letter. The Missouri State Medical Association can assist you in making those contacts through the Physician Involvement Program (PIP). If you donate your valuable time, the MSMA will do its very best to make the most of your efforts. Stress the positive alternatives as identified by our state society. Remember that a clear and united message will be best received.

The Auxiliary is actively involved as a voice for medicine. The Missouri State Medical Association Auxiliary will again host a **"Day at the Legislature"** on **March 1, 1989.**

Continued on page 693

MEDICAL PROFESSIONAL LIABILITY INSURANCE



Playing Leapfrog?

It's a kid's game. Great! Except that you're not a kid anymore. You're a health-care professional who doesn't have time for games, ESPECIALLY when it comes to your **medical liability insurance.**

Remember your last insurance company? When it came time for renewal, they played "hide 'n' seek" and disappeared. Completely. And remember that other insurance company that enticed you with super-low premiums, and then gave you renewal rates that made you "jump over the moon?"

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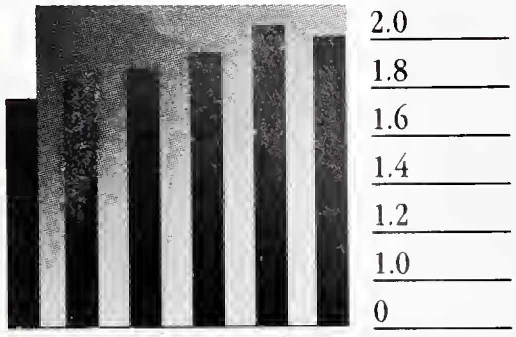

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PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
c/o Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102

Although your name will ***not*** *be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.*

Staff attire

Dear Dr. Woerth,

I seem to have a running battle with my staff regarding appropriate attire for the office. How can I deal with this problem once and for all?

Dr. G.T., St. Louis

Dear Dr. G.T.,

The problem with appropriate medical office attire for staff is a common one. To eliminate this problem, I recommend that every office develop an employee policy manual that clearly spells out your expectations of the staff. The manual should include a concise description of appropriate office attire noting acceptable shoes, hosiery, amount of jewelry, etc.

In addition, an employee policy manual should include information about vacation leave, paid holidays, maternity leave, method by which salary increases will be determined, benefits, etc. Each employee should be given a copy of the employee policy manual along with his/her job description.

Once you have established in writing the dress code for your office ask your employees to adhere to the code. You may occasionally have to suggest to an employee that he/she reread the description of appropriate office attire in the employee policy manual and that, I find, generally takes care of problems of appropriate office attire. ■

Efficient coding

Dear Dr. Woerth,

According to CPT-4, the 1988 edition, code 99070 is to be used for reimbursement of supplies and materials, e.g., sterile trays, drugs, over and above those included in an office visit. I find my reimbursement on this code is consistently far below the actual cost of my materials and supplies.

Is there a more efficient way of coding for supplies and materials?

Dr. C.L., Kansas City

Dear Dr. C.L.,

Yes, there is a more efficient means of coding for materials and supplies.

The Health Care Financial Administration (HCFA), the government organization responsible for Medicare, has developed an extension of the AMA's CPT-4 codes called HCPCS (pronounced "hic-pics"). These include codes for services and procedures not listed in CPT-4 plus codes for specific drugs and supplies used in medical offices. HCPCS stands for HCFA's Common Procedural Coding System and is made up of three levels of codes. Level I is the CPT-4 codes. Level II is alphanumeric codes that range from A0000-V9999 and are accepted by Medicare, Medicaid and many other third party payers. Level II codes include J codes which cover nearly all injectible drugs administered in a medical office, codes for surgical trays, syringes and needles, gloves, splints, dressings and many other supplies and procedures. Level III is made-up of codes developed by the local Medicare carrier for local use. They also are alphanumeric codes, W0000-Z9999, and include supplies, drugs and procedures not listed in Level I or II. Level II and III HCPCS codes are available from your Medicare representative or through the Freedom of Information Division of your local Medicare office.

It is important when using HCPCS codes to know that use of the code that most specifically suits your situation generally results in the best reimbursement. Thus, if similar definitions for codes exist in

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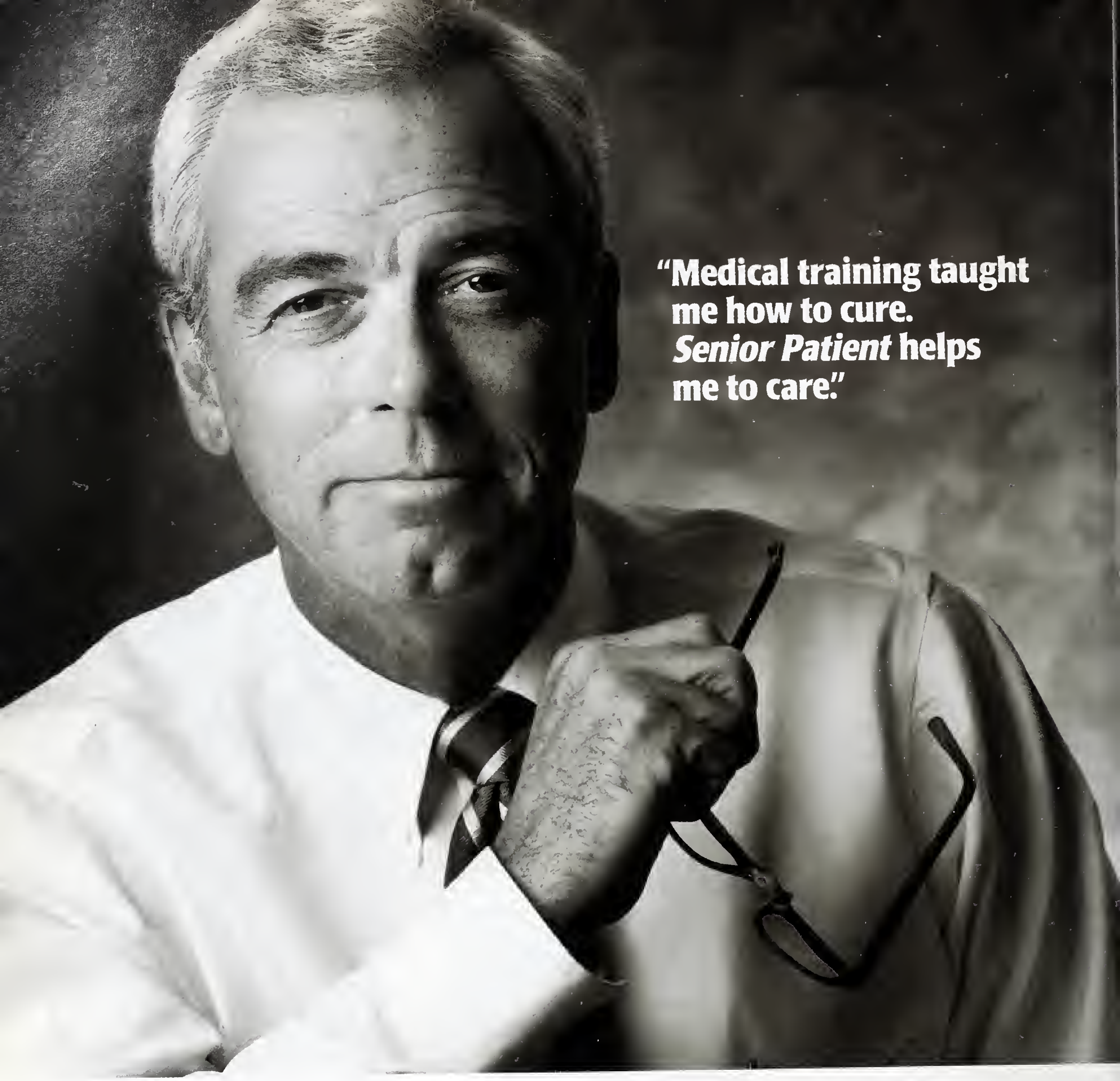
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Batting .1000 with Baseball Cards

By

Valerie A. Peters

When physicians congregate at professional or social functions, you expect their conversations to range from advancements in AIDS treatment to health advocates in the Legislature. What you might **not** expect is a heated discussion on the value of the 1985 Mark McGwire rookie card.

But then again, if you're talking to Michael Perry, M.D., Robert Ferris, M.D., or Robert Doroghazi, M.D., chances are you might not be so surprised. These three Mid-Missouri doctors have more in common than their medical degrees; they are all avid baseball card collectors.

In an era when many collectibles have dropped sharply in price, the ubiquitous cards packaged with bubble gum and collected by kids for decades have become big business. *Money* magazine recently ranked them as the number one investment in today's investment market.

"Baseball card collecting is the best investment of the 1980s — bar none," says Dr. Ferris, a Jefferson City obstetrician/gynecologist. "It's really jumping and it just keeps on going."

But is that why these doctors collect the cards? Come on, guys, fess up . . . you're really just kids at heart, right?

Robert Ferris, M.D., takes a look at one of his favorite sets of cards.

"I'm in it for the fun, admits Dr. Perry, 43. "If at the end I break even or don't **lose** any money, that will be fine with me."

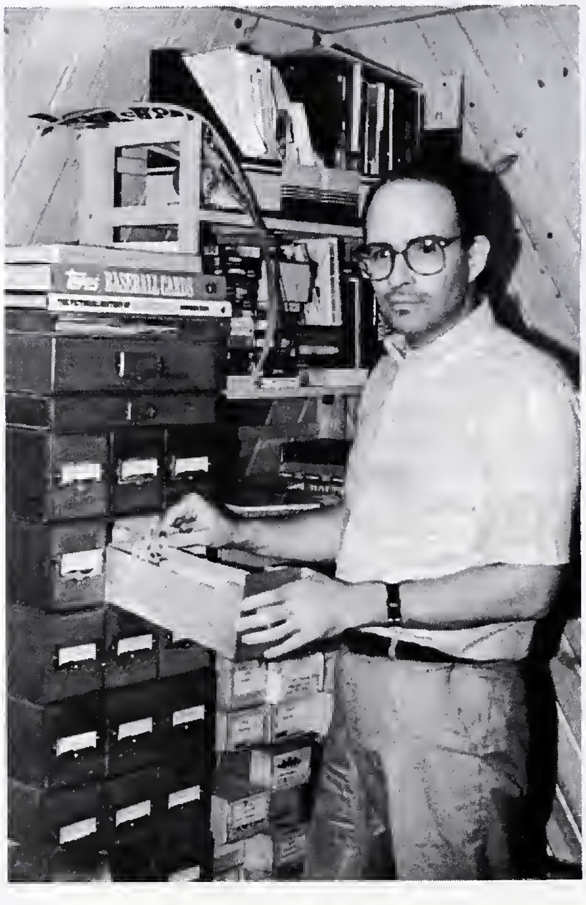
Dr. Perry's impressive collection of cards hovers around 50,000. That's a lot of bubble gum to chew! He stores his cards, caps, jerseys and other baseball memorabilia in a small room in the basement of his house. It is "**the** baseball room." The room vaguely resembles an office, but amid all the baseball cards, it's hard to see the furniture.

The unique aspect of his collection is the Columbia oncologist's approach to collecting certain cards. Dr. Perry acquires regular trading cards that come in the waxed packages available in the supermarket checkout line, as well as uniquely-packaged cards from the backs of cereal boxes, cutouts on potato chip bags and even cards affixed to boxes of macaroni and cheese.

"Once I spent an undetermined amount of time in Wal-Mart surrounded by boxes of macaroni and cheese," Dr. Perry says. "I was looking on the backs to find the cards I wanted. I ended up buying about 36 boxes. The sales girl asked if I really liked macaroni and cheese that much and I said, 'No, not really.' I got a really strange look."

Fortunately, Dr. Perry's wife informed the confused sales clerk that her husband collected the

Above: Michael Perry, M.D., points to a Kansas City Royals card on a poster that hangs in his "baseball room." Below: Dr. Perry stores his most valuable cards in a refinished card catalog filing cabinet. Behind him — baseball books, pennants and more baseball cards.



baseball cards found on the back of the boxes. When the Perrys returned home, he cut all the cards out from the boxes and Nancy put all the macaroni and cheese into a huge container.

"We're still eating the stuff," Dr. Perry says, chuckling.

Although Dr. Ferris, 39, says he is not quite so adventurous when it comes to collecting his cards, he scopes out the best cards just the same.

"I'm still trying to upgrade the sets I have," he says. "I'm pretty finicky, trying to get every card in the set perfect. I've got a list — every collector has a list — of what cards I need. So when I go to shows or dealers I know what I'm looking for."

Dr. Ferris says he isn't sure exactly how many cards he has, but says he has every Topps set from 1955 to 1988. Topps is the number one distributor of baseball cards and Dr. Ferris says Topps is his personal favorite also.

Many people argue that the commercialization of baseball cards is a shame. What used to be a sentimental hobby, one where kids could collect the cards of their heroes and keep them under their pillows, has become an investment scheme and killed the fun. According to a July 18, 1988 *Sports Illustrated* commentary, baseball card collecting is no longer a hobby filled with anticipation and wonder. The childhood pastime has turned into market analysis. Major leaguers aren't personalities and legends — they're entries in a ledger. And, the article says, a whole generation is buying into the idea that you **can** put a price on your memories.

However, Dr. Doroghazi, 37, emphasizes that it is first and foremost a hobby. He says that his main reason for collecting the cards is a love of baseball, not the value of his collection.

"That's the biggest thing of all — the emotional attachment," he says. "I mean, the ones that mean the most to me are those I had and collected when I was little. That's the thing, being a baseball fan."

Most children collect baseball cards between ages eight to 14. All three physicians began collecting baseball cards when they were in that age range. However, all three have different reasons for dropping out of the hobby for awhile. Dr. Ferris says that when his family moved he lost the cards. Since he was age 14 and at the tail end of collecting, he stopped. He got back into the hobby about three years ago when his two older sons Matthew, 13, and Kevin, 10, started collecting. His younger sons, Brian, 7, and Kyle, 4, also collect cards. His 17-month-old daughter, however, hasn't picked up the hobby yet.

Topps is Tops

The first complete Topps set, issued in 1952 with 407 cards, now fetches as much as $40,000. It contains the Topps rookie cards of Mickey Mantle and Willie Mays, two of baseball's most popular players.

"I started going with my sons to the card shops and saw some of the old cards I used to collect and that's how I got interested in it again. It's worked out pretty nicely. I like to collect all the older cards from the 50s, 60s and 70s, while my children like the newer cards."

Dr. Perry also started collecting cards when he was eight and stopped when as he says, "I discovered girls and the baseball cards ended then." In 1982, his parents were moving from his childhood home and cleaned out the basement. They called him and told him they threw out his old baseball cards. Dr. Perry asked his parents to save them, so his parents dug the cards out of the trash and mailed them to Columbia. This rekindled his interest in collecting.

Dr. Doroghazi collected cards from the ages of seven to 11. In 1980 he got back into it after he started going to shows and found he had several duplicates which could be traded or sold. He bought several older cards from when he was a kid and that rejuvenated his hobby of collecting cards as well as revitalizing the cardiologist's other hobby — collecting Hartland Statues.

From 1958 through 1963, the Hartland Plastics company of Hartland, Wisconsin, produced and marketed a series of 18 plastic figurines, each about eight inches in height, each depicting a different major league baseball star. Two other figurines were also produced, one of a little league baseball player and one of an anonymous batter. The statuettes sold for $2.95 and $3.95 in five and tens and department stores throughout America. Today most of the statuettes are worth close to $100, and a few of them are priced at as much as $400 and $500.

Some of the players depicted by the statues include Mickey Mantle, Stan Musial, Hank Aaron, Babe Ruth, Ted Williams, Willie Mays, Yogi Berra and Don Drysdale. The value of Hartland figurines is based almost entirely on availability, which explains why a statue of Dick Groat is worth more than a statue of Mickey Mantle or Hank Aaron.

Dr. Doroghazi has about 11 of the Hartland Statues. He hopes to someday complete his collection by obtaining the remainder of the 18-figure set.

"They're kind of unique," he says. "I don't know anyone else who collects them."

With baseball card collecting their passion, it should come as

How it all Began

According to an article by David S. Krause in the June 1988 *Money* magazine, baseball cards were first issued during the 1880s by U.S. cigarette companies to promote business. Very few of those early cards remain in good condition today, because most were printed on cheap cardboard and suffered from poor quality photography. The extremely small supply and enormous demand for cards of that era make them highly valued. A 600-odd card set issued by Old Judge cigarettes in the late 1880s would sell for $50,000 today.

When World War I started, baseball cards stopped. After the war they were again printed and distributed in mass quantities, this time by candy and gum companies. The new cards were of superior quality and issued in considerably greater quantity, typically tens of millions annually.

The second era of card collecting faded in World War II when paper and rubber shortages limited card and gum production. Bowman Gum Co. resumed the business in 1948. Brooklyn-based Topps Chewing Gum followed in 1951 and today dominates the market with more than half of total card sales annually.

For more than two decades after its 1956 acquisition of Bowman, Topps had a virtual monopoly on the card industry. Then in 1980, a U.S. district court ruled that Topps and the major leagues could not prevent other gum companies from issuing cards. A year later, Philadelphia's Fleer and Memphis' Donruss started competing. Major League Marketing of Stamford, Connecticut followed in 1986 with Sportflics and this year with Score.

Above: Robert Doroghazi, M.D., displays six of his Hartland Statues along with several of his favorite baseball cards. Below: Dr. Perry proudly palms (in his right hand) the 1954 rookie card of Al Kaline. In his left hand — a Stan Musial card under glass.

no surprise that all three doctors are avid St. Louis Cardinal fans.

"My kids have become fanatics this year," Dr. Doroghazi says. He has two boys, John, 7, and Michael, 4.

"They think Ozzie Smith is a god, think he's great," he continues. "I'm definitely a Cardinal fan."

Although he is a Cardinal fan, Dr. Perry spent the first 25 years of his life in Detroit, Michigan, and also developed an intense loyalty to the Detroit Tigers. In fact, his favorite card from his collection is the 1954 rookie card of his favorite player, Detroit right fielder Al Kaline. That's pronounced KAY-LINE. You don't want to mispronounce it unless you're prepared to see Dr. Perry grab his chest in horror at the faux pas!

A Growing Investment

Just to show how fast the investment can grow, a complete 792-card set of 1985 cards produced by Topps, the industry giant, sold originally for about $18. Three years later, a set in mint condition can bring $65 to $90.

"Al Kaline was a real Horatio Alger story," Dr. Perry says. "He went from high school straight into the majors. From sandlot ball in Baltimore to the Tigers. He was a great all-arounder. I was nine years old when he broke in the league. My first glove was an Al Kaline."

Now is that loyalty or what?

Dr. Ferris also claims to be a Cardinal fan, but shares his loyalty with the Boston Red Sox.

"When I was growing up, my dad worked for Monsanto so we moved around," he says. "We lived up on the East Coast for awhile so I'm a Red Sox fan too."

An important part of baseball card collecting is the storage of the valuable cards. Most collectors store their cards in plastic binders or notebooks, under glass or in specially-made boxes.

Dr. Perry stores some of his cards in a refinished library card catalog filing cabinet and some in plastic binders in notebooks. Taking care of the cards helps to retain their value, he says.

Dr. Ferris also keeps most of his cards in plastic binders in notebooks although in his "baseball card office" you can see cards in notebooks, under glass, and in unopened boxes of new cards. His wife, Diane, calls it "the mess." He just grins.

Dr. Doroghazi also keeps his cards in plastic binders and some boxes and admits that he hasn't taken the time yet to get them completely organized.

Top: Unopened boxes of baseball cards fill one corner of Dr. Ferris' baseball room. Bottom: A closer look at Dr. Doroghazi's Hartland Statues shows the attention to detail on the figures.

As with most boys, Perry, Ferris and Doroghazi all had visions of playing in the major leagues. But when dreams of hitting a home run in the World Series turned to dreams of a career in medicine, the men stuck to their cards and remained baseball fans by watching or listening to the games and rooting for their favorite player. And what does make a certain player some kid's "favorite" player?

"That's a good question," Dr. Perry says. "For some it's the star. For some, like me, it's just watching someone who's doing what he'd like to be doing."

It's safe to say that although none of the three doctors made it into the big leagues, they are doing what they'd like to be doing and their baseball card collections keep them right in the heart of America's favorite pastime. ■

To Err is Human . . . and Valuable

One of the most unusual reasons for a particular card's value is that it represents a mistake. For example, in 1979, Topps issued a pair of cards featuring Bump Wills. One card correctly pictured Wills in the uniform of the Texas Rangers; on the other card, he was depicted as a Toronto Blue Jay. In a 1981 price guide, the error card was listed at $6 and the correct Wills-as-a-Ranger card was priced at $3.

Another valuable error was made on a 1910 Joe Doyle card. On one of the cards the caption on the bottom states only "DOYLE, N.Y." The rare variation, however, also contains the league designation "NAT'L" after the name and team. The latter card recently sold for $10,000, making it the second most valuable card in the baseball card collecting hobby.

The most recent blooper to be spotted is on the 1988 rookie card of New York Yankee pitcher Al Leiter. The photo on the Topps card is actually of Steve George, a Yankee minor leaguer. Before Topps could catch and correct the error, an estimated 1 million cards were scooped up by fans and investors. The blooper cards will be especially prized if Leiter delivers on his sizzling start. The card is already worth $2.50.

Hang on to a Honus

Probably the most valuable baseball card of all is the T206 Honus Wagner card from a 1909-1911 set. Wagner, nicknamed "The Flying Dutchman," was the star shortstop for the 1906 Pittsburgh Pirates. The story goes that when the American Tobacco Company introduced the card, Wagner, horrified at the thought that his mother would think he used tobacco, got an injunction forcing the company to take the cards off the market. Fewer than 100 of the cards are known to exist.

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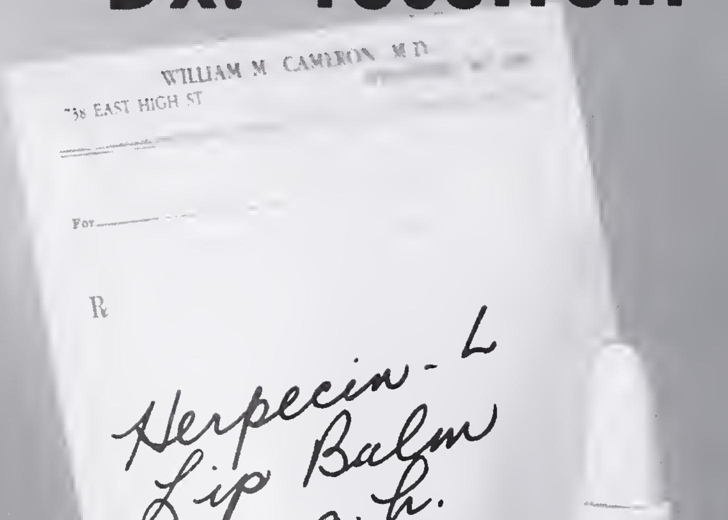

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Special Article

The Expanding Scope of PRO Review

Explaining Medicare's New Review Requirements in Missouri

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Executive Vice President
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Jefferson City, Missouri

In August the Missouri Patient Care Review Foundation began its fourth year of operation as the Peer Review Organization (PRO) for the Medicare program in Missouri. On October 1, 1988, the Foundation began working under its third and most wide-ranging federal contract to date. The purpose of this article is to explain the new requirements that will affect practicing physicians in Missouri.

The Foundation had to submit a proposal to the Health Care Financing Administration (HCFA) for this latest contract within the parameters of the scope of work (SOW) outlined by HCFA. Under the third scope, PRO review will expand significantly beyond the inpatient setting and will emphasize quality and education — areas on which the Foundation has always placed a premium — much more than at any time in the past. Moreover, the new contract lasts three years, rather than two.

Brief History of PRO Review

In the first SOW that began in August 1984, the thrust of the program was virtually all inpatient and strongly cost containment-oriented. The major issues were whether hospital admissions were medically necessary and if hospitals were coding properly for billing purposes under the new DRG system. There was a quality review component, represented mainly in the form of a set of quality objectives. However the objectives were not well formulated conceptually or for measurement purposes. During the first contract, the Foundation initiated application of generic quality screens on all cases reviewed. But Missouri was among very few states which did so.

While not actively discouraged by HCFA under the first scope, there were few incentives for PROs to engage heavily in educational activities with providers and practitioners. The program was, in some ways, very punitive. For example, a 2.5% denial rate for a hospital in one quarter resulted in 100% review of that institution's cases in the next quarter, then automatic rebuttal of payment for any cases denied in the subsequent quarter. At a time when hospitals and physicians were struggling with a plethora of new requirements with the implementation of the Prospective Payment System (PPS), the basis for these PRO program policies is difficult to understand.

The second scope, which concluded September 30, 1988, retained the inpatient focus with a small but significant movement to out-of-hospital review. PROs were required to evaluate the need for an assistant at cataract surgery regardless of whether the surgery was to be performed inpatient or outpatient. Likewise, PROs reviewed written complaints received from Medicare beneficiaries regarding quality of care in skilled nursing facilities, home health agencies and hospital outpatient departments.

The massive second opinion program mandated by Congress in 1986 and expected to be in place in 1987 has yet to come to fruition. But the message was clear — PROs would be determining the necessity of high volume procedures regardless of setting. Moreover, PRO review of Medicare HMOs/CMPs, while not performed by the PRO in this state, began under the second scope.

With the second scope came a significant shift to quality, with the requirement that PROs apply HCFA generic screens to all cases reviewed. In addition, the program became less punitive. A more reasonable 5% denial rate was needed to lead to intensification of an institution, with subsetting of intensification on identified problem areas now encouraged by HCFA. Further, waiver (payment for denied cases) was to be determined on a case-by-case basis.

The third and latest scope centers on quality and education. Cost containment has not disappeared but the emphasis has clearly shifted. While debate continues regarding some aspects of the new review requirements, on balance the PRO program is moving in the right direction.

New Review Requirements

The most significant review changes under the third SOW include systematic review of a wider continuum of care; expanded precertification requirements; and a much more federally-prescribed quality-intervention process.

Expansion of Review

Intervening Care The third SOW requires PROs to review intervening care for PPS readmissions within 31 days of a previous PPS hospital discharge. Intervening care is defined as care delivered by a SNF, HHA, HOPD, or acute care hospital between the identified admission/readmission. The PRO will select and review a 25% random sample of all identified readmissions for:

- necessity of admission
- appropriateness of inpatient care
- appropriateness of services rendered
- timeliness of services
- quality of care

The PRO will then review intervening care for 20% of the cases in the 25% readmission sample. Both cases with a possible premature discharge from the initial admission and those where the intervening care may have caused the readmission must be included in cases selected for intervening care review.

PROs will **not** perform intervening care review for medical necessity or utilization, nor will they deny payment for such cases. This is the responsibility of the fiscal intermediary. The PRO **will** review intervening care cases for quality, timeliness and appropriateness of services and setting.

HOPD review includes services where the outpatient department is the primary provider of ongoing care (clinic visits and therapy) and outpatient surgery. Review of post-hospital services does not include physicians' offices unless the physician is under contract and providing services at the hospital, with the hospital being custodian of the medical records.

All PROs must employ HCFA-mandated generic screens in the review of intervening care. Review criteria for intervening care will be provided to every hospital in the state, to skilled nursing facilities, home health agencies, the Missouri State Medical Association (MSMA), and the Missouri Association of Osteopathic Physicians and Surgeons (MAOPS) for distribution to physicians. Criteria are also available upon request from the Foundation.

Ambulatory Surgery In addition to review of intervening care, PROs must also review a 5% sample of surgeries performed in hospital outpatient departments and freestanding ambulatory surgical centers (ASC) while intervening care focuses on quality and does not relate to payment, review of ambulatory surgeries is broader in scope, relating to quality, coding and payment. Specifically, the purpose of ASC review is to determine the following:

- the medical necessity of the surgery
- the appropriateness of the setting in which it is performed
- quality of care delivered
- validation of CPT-4 procedure codes

The third scope also requires ancillary services review in connection with ASC review (although HCFA is apparently reconsidering this review component). Ancillary services are defined as any laboratory, x-ray, nuclear medicine, or other type of diagnostic study performed in conjunction with a surgery (i.e. billed on the same claim as the surgery). Through ancillary services review, the Foundation will determine whether those services were medically necessary considering the patient's diagnosis, medical state of health, anesthesia needs, and the surgical procedure to be performed.

The screening criteria in ASC cases are undergoing an extensive evaluation process. A set of draft criteria obtained from the Pennsylvania PRO, which was the first PRO in the country to have to implement ASC review, was reviewed by more than 50 surgeons statewide through meetings in St. Louis, Kansas City and Jefferson City during August and September. The composite recommendations of those physicians will be reviewed by the Foundation's Quality Assurance Committee and thereafter by the Board of Directors, before forwarding to HCFA for final approval.

Because the final approval process extends into the new contract period, the Foundation will use draft criteria in the interim. The criteria in use effective October 1, 1988, have been provided to all hospitals and freestanding ambulatory surgical centers in the state and will be provided at a minimum to MSMA, MAOPS, and the Missouri Surgical Society. They are available also from the Foundation upon request. Any revisions made during final approval process will similarly be provided.

Physicians must understand that these criteria, as with all review criteria employed by the Foundation, are screening criteria used by nonphysician reviewers to determine whether a case is referred to a physician for peer review. Once any case is forwarded to a physician for review, the determination is based on the merits of the individual case and not whether or not it meets screening criteria.

Physicians who perform ambulatory surgical procedures need to fully document the medical necessity of the procedure, the appropriateness of the setting and the ancillary services rendered. In addition, ASC record documentation must support the CPT-4 codes on the bill.

Precertification Precertification under the third scope represents a partial implementation of the second opinion program mandated by Congress in 1986 through the Consolidated Omnibus Budget Reconciliation Act. The cost and administrative difficulties in implementing a full-blown second opinion program have stymied its development nationally. However, the new scope incorporates that portion of the second opinion program that required PRO review of ten high volume procedures, regardless of setting, to determine both medical necessity of the procedure and appropriateness of the setting.

Beginning October 1, 1988, the Foundation will review preadmission/preprocedure (inpatient/outpatient) for all cataract extractions (except those performed in physicians' offices) and the nine surgical procedures (with ICD-9-CM codes) shown in Table 1.

Therefore, the Foundation expects at least a four-fold increase over the second scope in the number of calls received for precertification. Nursing staff will be available at the Foundation central office each working day, with phone coverage extended to 7:30 a.m. to 6:00 p.m.

Initial requests for approval are received by telephone and recorded directly into the computerized online preadmission/preprocedure screen. If the patient meets the criteria for necessity of admission, procedure, and location of services, the case is approved. If not, the case is referred to a physician reviewer.

Table 1

Procedures Subject to Preadmission/Preprocedure Review

(1) Cholecystectomy
51.21 51.22
(2) Carotid Endarterectomy
38.12
(3) Major Joint Replacement
81.41 81.62
81.48 81.63
81.51 81.64
81.59 81.69
81.61
(4) Coronary Artery Bypass Graft (CABG)
36.11 36.15
36.12 36.16
36.13 36.19
36.14
(5) Percutaneous Transluminal Angiography (PCTA)
36.01 36.02
(6) Inguinal Hernia Repair
53.00 53.03
53.01 53.04
53.02 53.05
(7) Complex Peripheral Revascularization
39.56 39.58
39.57 39.59
(8) Hysterectomy
68.3 68.6
68.4 68.7
68.5
(9) Prostatectomy (TURP)
60.2

The physician reviewer will contact the attending physician for further information as deemed necessary or deny the case based on the lack of evidence for medical necessity and/or appropriateness of setting.

In the case of an approved admission/procedure, written confirmation is provided to the hospital with a copy sent to the attending physician. When the case is denied, written notice is mailed to the hospital with copies sent to the attending physician and the patient.

Review criteria for precertification procedures have been provided to every hospital in the state, to MSMA, and MAOPS for distribution to physicians. Criteria are also available upon request from the Foundation.

Quality Review and Intervention HCFA is moving toward more uniform categorization of severity levels, including assigning of weights, and is requiring a quality intervention process that is much more prescribed than in the past.

Physicians need to understand the different severity levels as defined by HCFA, including examples.

Level 1: Medical mismanagement without potential for significant adverse effects on the patient.

Examples

- Inadequate medical record documentation.
- Mildly abnormal lab findings at discharge without documented evaluation, follow-up plan.
- Hospital-acquired decubitus ulcer, appropriately/timely treated, with no significant harm.
- Failure to provide an effective discharge plan with minimal needs of the patient.

Level II: Medical mismanagement with the potential for significant adverse effects on the patient.

Examples

- Antibiotic sensitivity tests not ordered in presence of septicemia, organism not sensitive to antibiotic; however, an appropriate antibiotic is selected timely and no significant harm results.
- Inappropriate, untimely monitoring/recognition/treatment of potentially life-threatening arrhythmia, however, no harm results.
- Inappropriate administration of IV fluids/medications corrected, and no significant harm results.
- Untimely monitoring/treatment of electrolyte abnormalities with symptomatic patient, but recovers without lasting effects.
- Elective major OR with pre-op evidence of unstable medical condition, but no harm results.
- Known COPD treated with high concentration of O_2, develops CO_2 retention with appropriate timely treatment initiated; patient recovers.
- Life-saving/sustaining equipment inadequately maintained, fails in an emergency, but no harm results.
- Patient is at risk due to insufficient personnel/services, but no harm results.

Level III: Medical mismanagement with significant adverse effects on the patient.

Examples

- Same as Level II, but patient experiences, for example: prolonged hospitalization, cardiac arrest, pulmonary edema, other increased morbidity, or death.
- Additionally, this level includes patients who are unstable at discharge and are readmitted for the same or related condition for treatment that was not provided during the initial admission.

It should be noted that the examples given are not meant to be all-inclusive, but representative of what is intended by the respective definitions.

As far as the review process itself, all final determinations of confirmed quality problems will be made through the Foundation central office and, more importantly, through a representative committee and specialist review process. Therefore, once a potential quality problem has been identified with a particular case, correspondence on that concern should be with the Foundation central office to the attention of the Assistant Medical Director.

Isolated potential severity Level I cases will be held or "pended" by the Foundation. When the number of potential severity Level I's for a physician reaches three in one quarter or five in two quarters (bi-quarter), the cases are sent to a specialist for review. The results of specialist review at that point will determine whether the cases are potential Level I's and will go to the Quality Committee. If the number of **potential** Level I problems reaches or exceeds the thresholds identified above, then it is determined to be a pattern, and the physician in question would be issued a pending quality letter. If not, the potential cases (if any) remain in a pended status. In this way, there should be less nuisance correspondence with providers/practitioners relating to minor, isolated quality concerns.

On the other hand, cases with potential Level II or III quality problems will always go to the Quality Committee for initial and final determination.

The Foundation Quality Committee will be comprised of as many as ten physicians in active practice throughout the state, representative of both M.D.'s and D.O.'s and the various major specialty groups. It is expected to meet about every two weeks to review referred medical records, issue pending quality letters, review responses and send final notifications. Final notification confirming quality concerns will include an indication as to what the more appropriate medical management would have been. The use of a multi-physician panel that meets on a regular basis will help ensure that final decisions are both appropriate and consistent relating to all cases reviewed for quality.

The Quality Committee will also be divided into two subcommittees for purposes of activities subsequent to review and final severity determinations. The Peer Education Intervention Subcommittee will make determinations relating to specific interventions and education with practitioners and to monitor the progress of same where instituted. The SancSub (short for sanction subcommittee) will oversee the prescribed process for sanction-related activities, with the emphasis very much on education.

As noted earlier, each severity level has been assigned a weight by HCFA. The three severity levels are weighted 1, 5 and 25, respectively, and PROs are required to compute weighted severity scores, based on **confirmed** quality problems, for each practitioner at least quarterly. Furthermore, PROs must implement interventions when weighted scores reach or exceed certain thresholds, and there is a relationship between the intervention required and the "weighted trigger." For example, a physician with a severity score of 15 in a quarter would be subject to intensified review. Again, it should be emphasized that this applies only to **confirmed** quality problems.

Table 2 outlines the interventions required in relation to the weighted score in a quarter. The notification process discussed earlier in regard to Level I problems entails a letter from the PRO describing the concern and review findings. Education may take the form of telephone and/or in-person discussion, suggested literature reading, CME courses, meetings and self-education courses, depending on the determination of the Peer Education Intervention Subcommittee.

Intensification is essentially 100% review of cases in one or more quarters and can, in some instances, be focused on specific kinds of cases. "Other Interventions" allows the PRO to employ more creative approaches, such as concurrent or predischarge review; prior approval or preadmission review of all or selected cases; and referral to the hospital QA committee.

There are circumstances in which the PRO may override the intervention required at a certain weighted trigger, and the Foundation intends to evaluate each set of circumstances individually rather than applying a strictly statistical mentality to the intervention process. But the burden of justifying such overrides rests with the PRO and must be appropriately documented for HCFA's review.

It has always been important to respond timely to quality concern letters from the Foundation. It is perhaps more so today. A potential quality problem to which a physician does not respond becomes both a confirmed quality problem and part of a weighted score. In addition, HCFA has determined that hospitals have a "compelling need to know" about quality problems that occur in their institutions and that individual confirmed quality problems identified by the PRO are disclosable to the hospital in which they occurred.

The Foundation Board of Directors considered this issue at its August 27, 1988, annual meeting and approved the following policy regarding the release of physician-specific quality data to hospitals: Beginning with cases reviewed on or after October 1, 1988, the Foundation will automatically notify the hospital of any quality problem(s) that results in a confirmed Level II or III severity score, as well as any pattern of confirmed Level I problems. To ensure that the communication is physician-to-physician, a copy of the letter sent to the physician whose care is in question will be sent to the Chief of Staff, attention QA/UR Committee in the hospital.

Table 2

Quality Severity Weights and Interventions

Intervention	*Weighted Trigger*
Notification	3/quarter or 5/bi-quarter
Education	10
Intensification	15
Other Interventions	20
Coordination with licensing bodies	25
Sanction Consideration	25

Emphasis on Education

As with quality of care, the Foundation has always placed a high premium on education. HCFA now strongly agrees. From beneficiaries and patients to hospitals, to physicians who are having difficulty, the focus will be on education. For example, in the Foundation's proposal to HCFA, former Foundation President and Medical Director, William D. Bradshaw, M.D., outlined an ambitious travel schedule within the state for the President designed to keep practicing physicians apprised of and involved in the PRO program in Missouri. As a physician-sponsored organization, the Foundation Board considers it of paramount importance that practicing physicians better understand this program and how best to work within it rather than against or outside it. Likewise, the Foundation expects to be regularly presenting seminars to hospitals and hospital groups across the state to explain the program, answer concerns and interpret changes as they occur.

In the third scope of work, it is clear that sanctions against physicians are indeed a last recourse when all other avenues have been tried and have failed. PROs are charged with doing all they can educationally to rectify identified problems with physicians and hospitals, and we welcome that charge. ■

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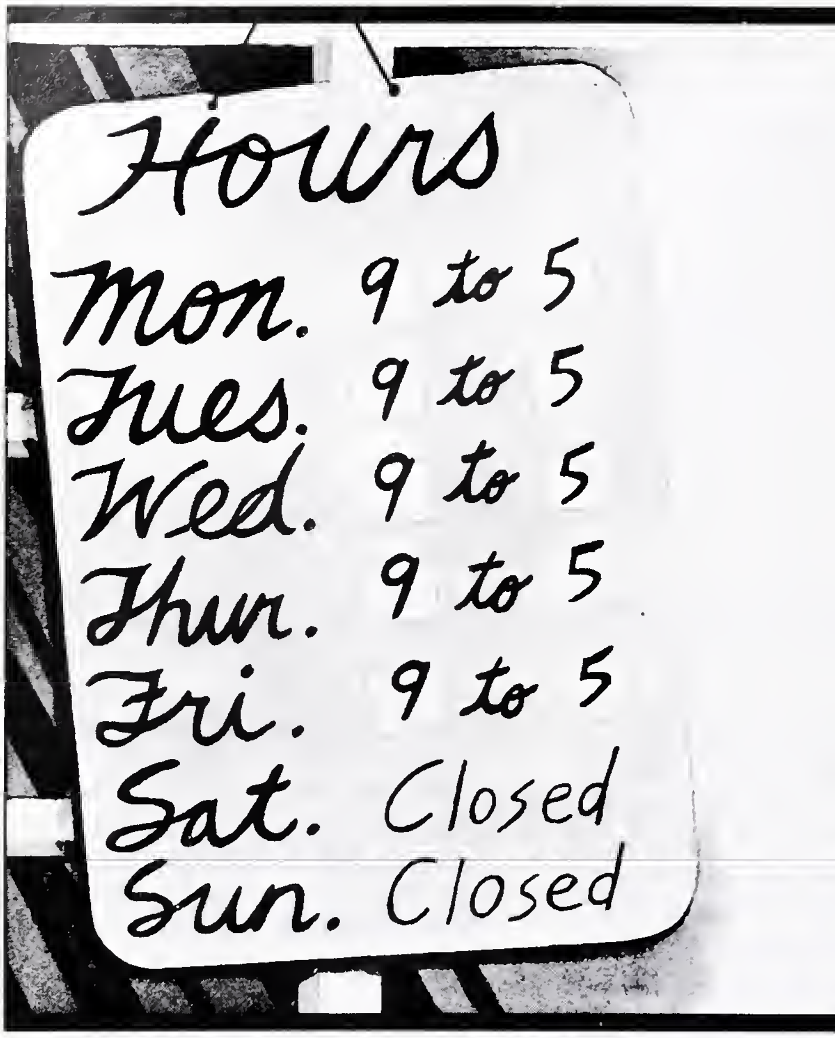

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Physician Participation in the Missouri Medicaid Program

Cynthia F. Bushmann and Gary O. Passmore
Jefferson City, Missouri

To what extent are Missouri physicians participating in the Medicaid program? This question was one of several that prompted a study by the Missouri State Medical Association of Missouri physicians' experience with the Medicaid program and its impact on access to care. In answering this question, the study provides an account of gross inequities resulting from inadequate funding and the absence of commitment on the part of policymakers to make health care a priority. Data for the study were drawn from both primary and secondary sources. Information about physicians and their experience with the Missouri Medicaid program was collected in a mail survey (N = 802) of non-federal, office-based physicians (M.D.'s and D.O.'s) conducted by MSMA during May and June 1988. Results indicate that the majority of office-based physicians are enrolled as Medicaid providers, but that participation is declining. The majority of those who continue to participate are limiting their Medicaid case load to a substantial degree. Two factors are primarily responsible for the decision to limit participation: low reimbursement and program administrative burdens (i.e., difficulty in dealing with the Medicaid "bureaucracy," excessive paperwork, etc.). Reimbursement levels are shown to be far below usual charges. The study raises questions about diminished access to primary care for low-income Missourians and the costs associated with diverting these patients to more expensive health care sites, such as hospital emergency rooms and outpatient clinics.

Although state government has traditionally played a major role in helping its low-income citizens access health care, Medicaid beneficiaries in many states are finding it increasingly difficult to find a physician who will care for them on a regular basis.

Physicians' unwillingness to accept Medicaid patients is widespread because Medicaid tends to provide lower reimbursement, impose more severe limitations on services, and impose greater administrative burdens than other third-party payers. This has been of considerable concern, because physician nonparticipation affects low-income patients' ability to access medical care and subsequently their potential to achieve optimal health.[1]

Concern also exists that lack of access to office-based physician services increases Medicaid costs by forcing patients to use hospital outpatient clinics and emergency rooms as their source of primary care.[2]

Table 1

Typology of Participating Physicians With Respect to Acceptance of Medicaid Patients and All New Non-Medicaid Patients
(N = 551)

		Accept All Non-Medicaid Patients?		
		None	*Only Some*	*All*
Accept Medicaid Patients?	*None*	Not Classified	Pseudo Participants *(12%) 55%	
	Only Some	Not Classified	Full Limiters *(37%)	Medicaid-Only Limiters *(47%)
	All	Not Classified	Not Classified	Full Participants 43%

* Percentages appearing in parenthesis represent percentages among participants who are limiters. An additional 2% of limiters, who are not represented in Table 1, could not be strictly classified.

Care provided in these settings costs the Medicaid program considerably more than if it were provided in a physician's office. In a study conducted by the State of Missouri in 1986, uninsured adults reported that the average per-visit charge for care provided in a hospital outpatient clinic or emergency room was almost three times greater than the average charge for care rendered in a physician's office.[3]

One indication of the extent to which Missouri's Medicaid recipients are using alternative health care sites is provided in outpatient/clinic data provided by the Missouri Division of Medical Services for the month of September 1986. According to this data, 19.7% of all Medicaid recipients used a clinic during this month, and 19.6% used hospital outpatient facilities.[4]

The cost difference between visits to outpatient departments and private physicians is an issue of considerable policy importance. Hospital outpatient department reimbursement accounts for about $1 billion annually for Medicaid, and these expenditures are escalating more rapidly than other portions of the budget. Reimbursement rates have traditionally been determined without reference to a unified payment plan and with little knowledge of the *actual* costs involved or the relationship of cost to diagnosis or setting. Yet, these rates affect more than 600 million visits a year nationwide to private physicians, outpatient departments and other ambulatory sites.[5]

Of course, the higher cost per visit in hospital outpatient departments reflects costs necessary for medical education; only a relatively small proportion of the additional cost can be attributed to more complicated case mix. In addition, hospital outpatient departments, whether teaching or not, provide access to care in many locations that cannot attract private practitioners.[6] Nevertheless, the fact that many Medicaid patients are being diverted to more expensive health care sites undermines the cost-containment objectives that have been central to health care policy for the past decade.[7]

For these reasons, states must assure that sufficient numbers of appropriately trained physicians are available to serve Medicaid patients. Thus, the issue of physician participation in Medicaid is extremely important.

This study examines physician participation in Medicaid, as well as factors that may be contributing to the decision to restrict or limit participation. In doing so, it explores physicians' experience with the Medicaid program in Missouri and the impact of this experience on beneficiaries' ability to access care.

Methods

This study draws on the results of a random sample of 2,357 non-federal, office-based Missouri physicians conducted by the Missouri State Medical Association in May and June 1988. The survey achieved a response rate of 34% (N = 802) and a sampling error of .030. Secondary sources were used to elaborate on major findings and to assess economic, political, and social conditions in the state. The results provide an account of gross inequities resulting from inadequate funding and the absence of social commitment on the part of policymakers to make health care a priority. In addition, the study raises policy-related concerns about Medicaid patients' ability to access care.

In the survey, physicians were asked to provide information on their participation in the Medicaid program and to evaluate various factors that might have caused them to limit their participation. The typology of physicians with respect to acceptance of Medicaid patients and all new non-Medicaid patients was patterned largely after a previous participation study of pediatricians.[8] Physicians also were asked to evaluate certain policy incentives that might increase participation. Because the level of physician reimbursement has been shown to be a major factor for physicians who limit participation, physicians were asked to provide their usual charge for 12 specific CPT procedures. The 12 procedures included six office visits, three hospital visits, one surgical procedure and two obstetrical procedures.

The Setting

Because each state administers its own Medicaid program under broad federal guidelines, services, eligibility, and provider reimbursement vary considerably from state to state. However, Missouri's program appears to be particularly poor.

In a recent study conducted by the Public Citizen Health Research Group, Missouri's Medicaid program received an overall ranking of fifth worst in the nation: "Missouri's severely restricted and thoroughly inadequate Medicaid program, the fifth worst in the nation, is marked by one praiseworthy feature: the state's relatively serious effort to control the quality of care given to Medicaid patients, particularly to those receiving nursing home care . . . but unfortunately, the rest of the program is unremittingly awful."[9]

According to the study's ranking of state Medicaid programs, Missouri has the seventh worst service coverage; is tied for the sixth/seventh worst eligibility policies; and has the fifth worst provider reimbursement policies.

Trends in Participation

Despite the inadequacies of Missouri's program, results of the study indicate that the majority of office-based physicians are enrolled as Medicaid providers. However, when compared to results of previous studies conducted in the 1970s and early 1980s, Missouri data point to a decrease in participation as physicians become increasingly dissatisfied with the Medicaid program.

National data from a 1976 Health Care Financing Administration survey showed that almost one-quarter of all physicians did not participate at all in Medicaid, and another one-quarter had Medicaid patient loads that were less than 10% of their total practice.[10] By contrast, statewide totals from the Missouri study indicate that almost one-third (31%) of physicians do not participate at all in Medicaid, and fully 72% of those who do participate have Medicaid caseloads that are 10% or less of their total practice.

National data from a 1983 study of non-federal, office-based pediatricians showed that 82% of respondents participated in Medicaid.[11] By comparison, our analysis indicates that 69% of all office-based physicians and 68% of primary care physicians are participating in Medicaid.

Furthermore, 60% of Medicaid participants in the pediatricians survey reported 10% or less of their patient load covered by Medicaid,[12] compared to 72% of Missouri physicians with 10% or fewer patients covered by Medicaid.

Extent of Participation

As these data indicate, physicians make several decisions regarding Medicaid participation. First, they decide whether to participate in the program. If participating, they then decide at what level to participate. Since most primary care physicians are enrolled as Medicaid providers, the decision regarding the *extent* of participation is the more significant policy concern.[13]

Results of the study show that fully 55% of the 69% who participate in Medicaid limit their participation to some extent. Thus, interpreting the participation rate in terms of *real* participation can be difficult.

Actually, an *enrolled Medicaid provider* is one who has a provider number; a *participating provider* is one who has at least *one* Medicaid claim. The problem is, these measures give equal weight to the provider serving an occasional Medicaid patient and one with a large Medicaid patient load. As a result, the proportion of physicians who ostensibly "participate" may be high, but, if most have very few Medicaid patients, the effective participation rate may be significantly lower.[14]

To determine more accurately the extent of participation in Medicaid, we developed a typology of participation and examined the size of Medicaid patient loads.

Typology of Participation

To determine the extent to which participating physicians can be classified as "full participants" or "limiters," respondents were asked: Do you now accept all Medicaid patients who contact you, only some, or none? and (2) Aside from patients whose care is paid for by Medicaid, are you currently accepting all new patients who contact you, only some, or none? The resulting typology can be examined in Table 1.

Full Participants

Although "limiters" outnumber them considerably, a substantial number of office-based physicians accept all Medicaid patients who contact them. These "full participants" make up 43% of the total number of office-based physicians who participate in Medicaid. Fifty-nine percent of full participants are primary care physicians, and 39% are engaged in other specialties. An interesting characteristic of full participants is their geographic distribution. Despite large physician populations in the St. Louis and Kansas City areas, most full participants (58%) are practicing in outstate Missouri, where physicians populations are much lower, and, thus, physicians may have little choice but to accept all patients who contact them.

Limiters

Aside from full participants, there remain the "limiters" — physicians who participate in Medicaid but who limit their Medicaid patient load to some extent. Limiters can be classified into three major categories: Medicaid-only limiters; full limiters; and pseudo participants.

Almost half of limiters (47%) are "Medicaid-only limiters" — physicians who accept only some Medicaid patients, but whose practices are open to all others who contact them. Sixty-four percent of Medicaid-only limiters are primary care physicians and 36% practice other specialties.

"Full limiters" accept only some Medicaid patients and only some non-Medicaid patients; thus, this group may limit their involvement in Medicaid simply because the practices are at capacity. Thirty-seven percent of limiters can be classified as "full limiters."

Fully 12% of limiters are "pseudo participants" — physicians who participate in Medicaid but who accept no new Medicaid patients. Because their practices are not closed to non-Medicaid patients, these limiters appear to be phasing out their Medicaid patient load.

Medicaid Patient Load

Although this typology provides an indication of the extent to which participants are willing to accept

Table 2

Size of Medicaid Patient Load Among All Medicaid Participants (N = 494)

% of Practice Medicaid Patients	*% Physicians with Medicaid Patient Load Within Range*
Less than 1%	19
1% – 5%	32
6% – 10%	21
11% – 20%	15
21% – 30%	5
31% – 50%	6
51% or more	2

Medicaid patients, a more accurate assessment of the extent of participation can be obtained from information on the size of Medicaid patient loads. Thus, physicians in the study were asked: Approximately what percent of your practice is made up of Medicaid patients?

As Table 2 indicates, a small number of physicians are assuming responsibility for a large proportion of Medicaid patients. More than nine in ten Medicaid participants (92%) have small Medicaid patient loads (30% or fewer patients in the practice are eligible for Medicaid benefits). In contrast, only 8% have large Medicaid caseloads (31% or more patients are eligible for Medicaid benefits). Furthermore, almost three-quarters (72%) of large Medicaid patient loads can be found among practices located in outstate Missouri, while only 28% are located in the St. Louis and Kansas City areas.

Close examinations of small Medicaid patient loads indicates that most physicians are closely controlling the number of Medicaid patients they accept. The majority of physicians with small Medicaid caseloads (32%) have caseloads between 1% to 5% of their total practice. Nineteen percent have Medicaid caseloads that are less than 1% of their practice, and 21% have caseloads in the 6% to 10% range. Thus, 72% of physicians have Medicaid patient loads that are 10% or less of their total practice; 51% have Medicaid patient loads that are 5% or less of their total practice.

Not only are physicians limiting the number of Medicaid patients they accept, but they appear to be cutting back on the size of their Medicaid caseloads over time. A comparison of physicians' acceptance of Medicaid patients for the years 1987 and 1988 revealed that 7% of Medicaid participants accepted no new Medicaid patients in 1987, and 8% are accepting no new Medicaid patients in 1988. In addition, many "full participants" appear to be joining the ranks of limiters: 6% are accepting fewer Medicaid patients in 1988 than they did in 1987.

Factors Affecting Cutbacks in Participation

To identify factors that may be causing participants to decrease the level of their participation, Medicaid participants and former participants (program dropouts) were asked to indicate whether certain factors had caused them to tighten their policy on accepting Medicaid patients. Table 3 provides a breakdown of these responses in order of their importance.

Table 3

Factors Affecting Cutbacks in Acceptance of Medicaid Patients Among All Program Participants and Former Participants (N = 620)

	% Respondents Affected
1. Medicaid program administrative burdens, such as excessive paperwork, complex forms, time involved in collecting payment, etc.	71
2. Inadequate payment for services	70
3. Denied claims requiring resubmission(s)	68
4. Program limitations, such as non-covered services, medical necessity attachments, requirements for prior authorization, etc.	59
5. Payment delays	57
6. Increased professional liability costs	47
7. Complicated patient eligibility requirements (for example, loss of patient eligibility during treatment)	45
8. Difficulty in treating Medicaid patients	38
9. Limited options for prescribing drugs of choice (restricted Medicaid formulary)	33

Note that the two most frequently cited factors are "Medicaid program administrative burdens" and "inadequate payment for services." Of only slightly less concern is "denied claims requiring resubmission(s)." Among "Medicaid-only limiters" and physicians who practice obstetrics, "inadequate payment for services" ranked first; "Medicaid program administrative burdens" ranked second; and "denied claims requiring resubmission(s)" ranked third.

With the exception of former participants (program dropouts), all groups of physicians consistently ranked these three factors in the top three places. Among former participants, "payment delays" took third place behind "Medicaid program administrative burdens" and "inadequate payment for services," with "denied claims requiring resubmission(s)" ranking fourth.

Although most studies have cited low reimbursement as the major reason for restricting participation, it is obvious that Missouri physicians consider Medicaid program administrative burdens to be equally blameworthy. Judging from responses, as well as comments on numerous questionnaires, physicians are experiencing a great deal of frustration in dealing with the Missouri program. The Division of Medical Services is generally considered a "suffocating bureaucracy" that is "hard to work with" and "arbitrary" in its enforcement of countless regulations. Collecting payment is, apparently a "bureaucratic

Table 4

Effect of Policy Changes on Participation
(N = 800)

Based on what you have heard, read or experienced, how useful do you believe the following changes would be to encourage physicians to participate in the Missouri Medicaid program? (Check one answer for each item listed on the left.)

	Positive Effect	*No Effect*	*Negative Effect*
Increase Medicaid payment for office visits.	97%	1%	0%
Increase Medicaid payment for hospital visits.	91%	7%	0%
Increase Medicaid payment for all diagnostic services.	84%	13%	0%
Guarantee patient eligibility for the course of treatment.	79%	19%	0%
Establish differential payment for specialty services, such as services provided for high-risk OB patients.	77%	17%	2%
Expand patient benefit provisions.	72%	23%	5%
Establish a prescreening system to assist physicians in dealing with Medicaid claims.	66%	25%	4%
Expand Medicaid eligibility provisions, such as guaranteeing eligibility for one year for newborns.	62%	30%	2%
Expand provisions and benefits of the Early Periodic Screening, Diagnosis and Treatment (EPSDT) program.	54%	38%	1%
Increase Medicaid payment levels progressively as Medicaid caseload increases.	53%	39%	5%

NOTE: *Percentages may not total 100 because of non-responses and/or rounding.*

nightmare." In addition, physicians who attempt to work with the agency to rectify misunderstandings are given the "bureaucratic runaround." As one physician put it, "Medicaid claims have a code and a rationale all their own . . . (the state) seems to take delight in rejecting claims for very trivial reasons, and they try to delay payment as long as possible."

View of Medicaid Program

To determine how physicians generally view Medicaid, physicians were asked for their "general" impression of the program. Furthermore, to place their answers in perspective, physicians also were asked to rate the Medicare and Blue Cross programs.

Results indicate that 87% of respondents regard the Medicaid program negatively, compared to 61% who view Medicare negatively and 29% who view the Blue Cross negatively. Conversely, only 2% of respondents indicated that their "general impression" of the Medicaid program is positive, whereas 15% have a positive view of the Medicare program, and 35% view Blue Shield positively.

An interesting aspect of this analysis is the lack of ambivalence among physicians toward the Medicaid program. Only one in ten respondents (9%) said their impression of the Medicaid program is "neither positive nor negative," whereas many respondents appeared to lack strong feelings about Medicaid or Blue Shield. Perhaps the most startling aspect is that more than half of respondents (54%) said their general impression of the Medicaid program is "very negative." To what extent these strong feelings discourage participation is unknown; however, it must be assumed that these physicians would be more inclined to participate in the Medicare or Blue Shield programs than in the Medicaid program. Nevertheless, it is clear from these responses that physicians regard the Medicaid program with disdain.

View of Medicaid Patients

In addition to disliking the Medicaid program, a good many physicians dislike treating Medicaid patients. According to these physicians, Medicaid patients fail to keep appointments; do not follow instructions; are more apt to file malpractice claims; and are generally "hard to deal with." Thus, physicians were asked to indicate their "general impression" of Medicaid patients. Again, to lend perspective to their responses, physicians also were asked for their general impression of both Medicare and Blue Shield patients.

Results of this analysis indicate that physicians are far less negative toward Medicaid patients then they are toward the Medicaid program. However, despite a more positive response, only 8% of physicians indicated a positive impression of Medicaid patients. This compares to a 46% positive rating for Medicare patients and a 50% positive rating for Blue Shield patients.

In fact, a good many physicians believe that accepting too many Medicaid patients may jeopardize their ability to attract other patients. Almost half (46%) of respondents agreed with the statement: "Attempts at blending a Medicaid practice with a practice composed of private patients may jeopardize a physician's ability to attract private patients."

Medicaid Patient Outcomes

Some concern exists among physicians that Medicaid patients are high risk, compared with other pa-

Table 5

Physicians' Average Usual Charges Compared to Medicaid Payments for Selected Procedures

	Avg Usual	*Medicaid Payment*	*% of Usual*	*# Respondents*
Brief Office Visit, New Patient (90000)	27	15	.55	349
Limited Office Visit, New Patient (90010)	33	15	.45	486
Comprehensive Office Visit, New Patient (90020)	62	27	.45	565
Comprehensive Hospital Visit, New Patient (90220)	83	28	.34	521
Brief Office Visit, Est. Patient (90040)	21	10	.47	511
Limited Office Visit, Est. Patient (90050)	30	14	.46	534
Comprehensive Office Visit, Est. Patient (90080)	50	25	.50	533
Limited Hospital Visit, Est. Patient (90250)	32	12	.37	482
Extended Hospital Visit, Est. Patient (90270)	50	15	.30	423
Appendectomy (44950)	743	220	.30	72
Total Obstetric Care (59400)*	1283	595	.46	78
Vaginal Delivery	928	390	.42	80

* Until July 1987, Medicaid paid $310 for total obstetrical care.

tients. To determine the extent to which poor patient outcomes are experienced by physicians who treat Medicaid patients, program participants were asked to answer two questions: (1) In general, what has been your experience with medical outcomes, relative to your treatment of Medicaid patients? and (2) Relative to medical outcomes, how does your experience with Medicaid patients **generally** compare to your experience with other patients who are not Medicaid recipients?

Results from the first question indicate that 18% of physicians experience "very satisfactory" outcomes with Medicaid patients; 49% experience "moderately satisfactory" outcomes; 21% experience "moderately unsatisfactory" outcomes; and 6% have "very unsatisfactory" outcomes.

However, in response to the second question, fully 46% of physicians said that outcomes were not as good with Medicaid patients compared to other patients. Although patient outcomes with Medicaid beneficiaries compare unfavorably with other patient outcomes, this problem has not negatively affected participation to the extent that several other factors have. As Table 3 shows, only 38% of Medicaid participants and former participants indicated that difficulty in treating Medicaid patients had caused them to tighten their policy on accepting Medicaid patients.

This is fairly surprising in the light of the fact that 61% of respondents agree that "Medicaid patients are high risk, compared to most other patients" and 49% agree that "Medicaid patients are more likely to file malpractice claims than most other patients."

Response to Medicaid Policy Incentives

Given the implications of limited Medicaid participation for both access and health care costs, it is important to know as much as possible about the options available to federal and state policymakers for increasing participation in Medicaid.

To determine the impact of certain policy incentives on participation, respondents were asked to indicate how *useful* they believe certain changes might be to encourage physicians to increase their participation. Table 4 summarizes physicians' responses.

If physicians are in agreement on any single policy change, it is that reimbursement should be increased. Fully 97% agreed that increasing Medicaid payment for office visits would encourage physicians to participate in Medicaid. Nine in ten respondents (91%) agreed that increasing reimbursement for hospital visits would help encourage participation, and more then eight in ten (84%) agreed that increasing payment for all diagnostic services would help improve participation.

Physician Reimbursement

As previous discussion has shown, physician reimbursement under Medicaid is a major reason for shallow participation in the Medicaid program. Meanwhile, the gap between Medicaid reimbursement and physicians' usual charges continues to widen. Medicaid pays physicians less than any other third-party insurer in the United States. In Missouri, payment is particularly poor. Current estimates are that Missouri pays about 35%, overall, of physicians' usual charges.[15] For most procedures, payment is far below the average paid in neighboring states.[16] So low are reimbursement rates in Missouri that physicians are providing many services at below cost.

To determine the extent of the reimbursement gap, physicians were asked to provide their "usual charge" for several types of visits and procedures. From this information, an average was calculated for each visit/procedure on the list. Table 5 lists the calculated average charge for each visit/procedure, along with the Medicaid payments; the percentage of the average usual charge covered by the Medicaid payment; and the number of respondents used to calculate the average.

As Table 5 indicates, Medicaid payments fall far short of physicians' average usual charge. This finding coincides with the AMA's finding that Medicaid payment is usually less than half of physicians' typical fee.[17]

At the same time, the cost of providing physician services is spiraling. In the current economic environment, the overhead costs required to deal with Medicaid's "administrative burdens" prevent most physicians from accepting a great many Medicaid patients. In short, results indicate that physicians can no longer afford to absorb the cost of Missouri's severely underfunded health system.

Conclusion

Reimbursement has a significant impact on whether a physician will choose to participate in Medicaid. As results have shown, once physicians elect to participate, they do so in many different ways. Increasing reimbursement might encourage physicians who are limiting their Medicaid patient load to become full participants and accept all Medicaid patients who contact them. For others, reducing the "bureaucratic hassle" associated with participation would also be necessary.

There is little doubt that Medicaid beneficiaries are experiencing difficulty in accessing needed health care. Equally important from a policy standpoint is the fact that many Medicaid patients are being forced to seek care in the more expensive outpatient clinics and emergency rooms because they cannot find a physician who will treat them on a regular basis. As we have seen, care in these settings costs the Medicaid program as much as three times more than care provided in a practitioner's office.

If Medicaid beneficiaries are to have the opportunity to achieve their potential for optimal health, they must have access to the "gatekeepers" of the health care system. At this point, only substantial change can reverse physicians' attitudes toward the vast inequities that exist within the Missouri Medicaid program.

The recommendations evolving from this study call for substantial change related to the issues discussed here, as well as other findings that could not be included in this particular article because of space limitations.

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Lyme Disease in Missouri

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The first reported case of Lyme disease in Missouri is presented. Since the incidence of Lyme disease continues to increase nationally, early recognition and antibiotic therapy are discussed as is the life cycle of the tick carrying this disease.

Lyme disease, originally described as Lyme arthritis in 1975, is caused by a newly-recognized bacterium, *Borrelia burgdorferi* that is transmitted by various species of the tick, *Ixodes*.[1,2] The endemic areas of the United States are the Northeast from Massachusetts to Maryland; Wisconsin and Minnesota in the Midwest; and California and Oregon in the West. However, Lyme disease has been found in 32 states, on every continent except Antarctica, and is recognized as the most common tickborne disease in the U.S.A.[3] We report the first Missouri case.

A 48-year-old female from Springfield, MO, had a temperature of 38.9°C (102°F) with headache, myalgias, chills, mild abdominal pain, nausea and diarrhea. She was admitted to a hospital for evaluation four days after onset of the fever. Approximately six weeks earlier she had an erythematous, nonpruritic rash on her left forearm. It began as a small, red, raised spot that gradually increased to a diameter of 16 cm, with central clearing. There was no pruritis or burning associated with the lesion and the erythematous border was approximately 1 cm to 2 cm wide. A second lesion appeared on her right forearm two weeks later, not reaching the size of the first one and fading before admission.

Her medical history revealed seropositive rheumatoid arthritis currently in remission. No family members experienced similar symptoms. Although she visited Wisconsin several weeks prior to admission, she emphasized that the rash began prior to her trip. She denied insect or tick bites or exposure to animals other than her own dogs and cats.

The patient's physical exam revealed no acute distress with a temperature of 102°F, blood pressure 110/60 mmHg, pulse rate of 70 beats per minute, and respirations of 12/min. Her neck was supple without lymphadenopathy, and her abdomen was soft and nontender without organomegaly or masses. A 4 cm to 8 cm by 14 cm to 16 cm lesion with a 1 cm erythematous border with central clearing appeared on her left forearm. No eschar was identified.

Laboratory results revealed WBC 5300/m^3, hemoglobin 12.6 g/dL, hematocrit 37.5%, platelet count 127,000/m^3 and a Westergren sedimentation rate of 23 mm/h. Other results included SGOT 97 U/l (normal 22-47); lactic dehydrogenase (LDH) 321 U/l (normal 100-250); creatinine phosphokinase (CPK) 27 U/l (normal 10-70); alkaline phosphatase 99 U/l (normal 25-80). Blood cultures, stool cultures and bone marrow cultures were negative. Serologic studies for fungus, leptospira, syphillis and hepatitis B were negative. Initial Lyme disease antibody titers were negative.

Ultrasound of the gallbladder was normal as was the chest radiograph. Bone marrow aspiration showed mild plasmacytosis with increased iron stores. A 5 mm shave biopsy of the lesion on her left forearm revealed a superficial perivascular lymphocytic infiltrate. No fungal, acid fast or spirochete lesions were found.

She was febrile during the first three days of her hospital stay so a 14-day course of tetracycline, 500 mg four times a day, was initiated. Her temperature returned to normal, and her rash began to resolve.

Lyme disease antibody titers repeated 14 weeks later revealed an IgG titer of 1:256 and IgM titer <1:40.

Clinical manifestations seen in Lyme disease in the U.S. include the typical skin rash, erythema chronicum migrams (ECM), neurologic and cardiac involvement and rheumatologic manifestations. Lyme disease as seen in Europe differs in that fewer rheumatologic and cardiologic manifestations occur. The ECM rash typically develops from two to 30 days after the tick bite and is often accompanied by a flu-like illness with chills, fever, headache, fatigue and backache. An initial papule progresses to a large lesion with (partial) central clearing. These lesions may measure 60 cm to 70 cm in diameter or be as small as a few cm. In addition, they may disseminate and multiple, secondary ECM lesions develop.[4] Both the primary and secondary lesions usually fade in two to three days in treated patients. In untreated patients the lesions may last 10-14 days or persist for months and reappear up till one year after onset. In some cases the site of the tick bite may become necrotic.

Laboratory testing is of little value in the diagnosis of Lyme disease. Common findings include elevated ESR, lymphopenia, leukocytosis, mild anemia, elevated aspartate aminotransferase levels, microhematuria and mild proteinuria and occasional ANA-positivity in children.

Serum complement levels are elevated or normal. The most common neurologic manifestations are aseptic meningitis; cranial neuropathy, especially Bell's palsy, and peripheral radiculoneuropathy.[5] Cerebellar ataxia, myelitis, encephalitis and cranial neuritis also have been reported. CSF findings include mild to moderate WBC elevations with lymphocytes predominating, elevated protein, and normal glucose levels. Approximately 15% to 20% of patients with untreated Lyme disease develop neurologic disease approximately two to 11 weeks following the tick bite, with a mean of four weeks.

In about 8% of untreated patients, cardiac manifestations generally occur within three to 21 weeks from the time of the tick bite. Conduction abnormalities predominate from various degrees of A-V block to complete heart block and myopericarditis.[6] These symptoms usually last from a few days to five to six weeks and do not recur.

Approximately 50% to 60% of untreated patients will develop arthritis (mono or oligoarticular) two to 24 weeks after the initial tick bite (mean, six weeks); occasionally arthritis develops up to two years later.[7] The knee is involved in most of the cases (80%) followed by shoulder and other joints. Arthritic attacks may persist for months and may recur. In about 10% of the patients, chronic destructive arthritis, which can mimic rheumatoid arthritis, develops. Joint fluid examination reveals moderate inflammation, with WBC counts 20,000 to 100,000 with neutrophils predominating. Protein may also be elevated (3-8 g/dL).

Various ticks have been implicated as possible vectors of *Borrelia burgdorferi*. In the United States it is transmitted primarily by hard-bodied ticks, *Ixodes dammini, pacificus* or *scapularis* (Southeast) and possibly by *Amblyomma americanum* (Lone Star) and *Dermacenter variabilis* (American dog tick). *Ixodes ricinus* is the vector in Europe.[8] It is interesting that *Ixodes dammini* also serves as a vector for both Lyme disease and babesiosis, a malaria-like infection that occurs in the northeastern United States.

The life cycle of *I. dammini* is interesting in that the nymphal stage is active before the larval stage. It requires a two-year life cycle with eggs deposited in the spring hatching within a month into free-living larva that feed on a host's blood. This is followed by a resting stage during the fall and winter months. In the spring the larvae molts and enters a nymph stage, attaching itself to an animal host such as a human or mouse. Nymphs molt into adult stage during late spring and summer and feed on a variety of mammals such as the white-tailed deer. At this point the adult ticks mate and the male dies. Then the female over-winters, and deposits her eggs which hatch in the spring. Thus the cycle is repeated. Both the white tailed deer and white-footed mouse are preferred hosts for the tick and this may contribute to the spread of the disease.

After the tick bites, the organism invades the host tissue. The organism spreads outward in the skin resulting in a skin rash after three to 30 days incubation. The organism can be cultured or observed in histological sections at this site. However, culture or skin biopsies are not indicated for establishing a clinical diagnosis. Possible secondary sites include heart, CNS and joints. Culture of the organisms also has been successful from blood, spinal and joint fluid. Certain neurological and rheumatological manifestations possibly may result from immunologic as well as from direct invasion of the organism but the mechanism of these are not known at the present time.

In most cases, Lyme disease has been diagnosed serologically, e.g. enzyme-linked immunosorbent assay, or by indirect immunofluorescence since the organism is difficult to culture or detect by staining methods in mammalian tissue. Although both techniques lack optimal sensitivity early in the illness, the former test is considered more specific and sensitive. Both IgM and IgG titers may be negative early in the disease.[9] Later in the illness a single IgG titer (1:256) is helpful in diagnosing Lyme disease. Obviously, a fourfold increase between acute and convalescent IgM titers is also diagnostic. Members of the *Borrelia* and *Treponema* genera do have common antigens.[10] Hence, serological test results may be misinterpreted if certain clinical data do not support the diagnosis. Since Lyme disease can be distinguished clinically from relapsing fever, leptospirosis, and yaws, and VDRL testing can distinguish between Lyme disease and syphilis, then serological analysis, supported by clinical information, can be a useful diagnostic aid.[11]

To avoid Lyme disease, wear light colored clothing and high socks when entering habitats of the Ixodid ticks during spring and summer. Promptly remove ticks from skin and clothing. Check pets for ticks and remove immediately. Use tick repellents containing 0.5% permethirin which provide complete protection or mosquito repellents containing 30% DEET which is 92% protective.[12]

Drug treatment of Lyme disease varies. In its early stages, the drug of choice is tetracycline. Administer 250 mg four times daily for ten to 20 days, depending upon the rapidity of response. In children with deciduous teeth, or adults who cannot tolerate tetracycline, phenoxymethyl penicillin is recommended, and, alternatively, erythromycin in those allergic to penicillin. Later systemic complications have not been observed in patients treated with tetracycline, but have been observed in penicillin- or erythromycin-treated patients.[13]

Later complications of Lyme disease require additional therapy. Cardiac disease including symptomatic A-V block, has been effectively treated with corticosteriods in addition to tetracycline.[4] Serious central nervous system disorders including meningoencephalitis require intravenous penicillin in a dosage of 20 million units per day for ten days.[14] Treatment of arthritis with intramuscular penicillin with 2.4 million units per week for three weeks, is effective in 35% of patients. When penicillin is given intravenously with 20 million units daily, the cure rate increases from 35% to 55%.[15]

Lyme disease is a multisystem disorder that should be considered in a patient with previous history of erythema chronicum migrans and exposure to an endemic area of disease. It must be noted that 20% to 40% of patients have no knowledge of previous erythema chronicum migrans or tick bite which may be due to the small size of the ticks (1-2 mm). The geographic distribution is continually expanding as this case report illustrated. Diagnosis should be based on historical, clinical and serologic data. *B. burgdorfi* serologies may also be indicated in patients with Bell's palsy and seronegative arthritis.

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Squamous Cell Cancer of the Anus

The Ellis Fischel Experience and Current Trends in Management

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The authors report their institution's 40-year experience in the management of squamous cell carcinoma of the anus. Current studies favor a multimodality approach to treatment combining chemo- and radiotherapy, and Missouri Cancer Registry data indicate patterns of care may be changing to reflect the new approaches.

Squamous cell carcinoma of the anal region is an uncommon neoplasm estimated to account for less than 0.2% of all cancers and 2% to 5% of cancers arising in the anorectal region.[1, 2] According to a 1988 estimate, 42,000 new cases of rectal cancer will be diagnosed in the United States this year.[3] The same report anticipates that 1,500 of these cases will be treated in Missouri. Using these estimates, the number of cases of anal cancer in Missouri would be expected to be between 30 and 75 for 1988.

The abundant literature on this subject consists mainly of retrospective analyses of single institutional experiences and reports an overwhelming preponderance of radical surgery as the primary treatment.[4-8] Historically, the use of radiotherapy as the primary modality of treatment for anal cancer has been practiced in institutions with expertise in unique radiotherapeutic techniques[9, 10] where large numbers of patients were treated over a long period of time. The long-term results using abdominoperineal (AP) resection and primary radiotherapy have been similar and have changed little over several decades. In 1974, Nigro and co-workers[11] published their initial experience with the treatment of this malignancy using a multidisciplinary approach consisting of neo-adjuvant chemotherapy and concurrent radiation treatment. Abdominoperineal resection performed on two of these patients, following planned adjuvant treatment, was found to have rendered the surgical specimen free of tumor. A third patient, who refused AP resection, remained clinically cancer-free. This experience led to further trials by the same[12-14] and other groups.[15-19]

In view of the changing trends in management of this neoplasm, we reviewed our center's experience in the treatment of anal cancer over a 40-year period and evaluated recent literature regarding the use of a multimodality approach. We also felt that trends in the management of this problem in Missouri could give an indication of the acceptance and application of new modalities of management.

Material and Methods

During the 40-year period between 1941 and 1981, 63 patients with squamous cell carcinoma of the anus were evaluated at Ellis Fischel State Cancer Center (EFSCC) in Columbia. Follow-up was complete in all cases, for at least seven years or until death. These patients were all Caucasian, with 47 women and 16 men for a female-to-male ratio of 2.9:1. Their ages ranged from 32 to 87 years, with a mean age of 60 for male and 62 for female patients. The staging of the disease at the time of diagnosis is depicted in Table 1. In 61 patients the stage of time of diagnosis could be ascertained. Patients with stage III and IV disease accounted for 67.2% of all cases (41/61). The microscopic diagnosis of squamous cell carcinoma was made in all cases.

The modalities of treatment utilized in managing these patients are depicted in Table 2. Radical resections, including two posterior pelvic exenterations and 47 AP resections with or without posterior vaginectomy, accounted for 77.7% of all cases (49/63). Four patients received radiotherapy as the only method of treatment, and two patients underwent local excision only. Among eight patients with advanced disease and in poor medical condition, six underwent colostomy only, and two did not receive treatment. Groin dissection was performed in 14 patients for therapeutic (3) or prophylactic (11) indications. Two of these

Table 1

Stage at Diagnosis of 61 Patients with Anal Cancer

Stage	*No. Patients*	*Percent*
0 (in situ)	1	1.6
I (T1-N0)	4	6.5
II (T2-N0)	15	24.7
III (T3-N0)	15	24.7
(T2-N1)	3	4.9
(T2-N2)	6	9.8
(T3-N1)	4	6.5
(T3-N2)	3	4.9
IV	10	16.4
TOTAL	61	100%

patients had bilateral dissections. During the years 1985-1987, five additional patients with squamous cell carcimona of the anus were treated at EFSCC, one with a posterior exenteration for a bulky, locally advanced tumor and four with chemo-radiotherapy combination. The Missouri State Cancer Registry (MCR) provided data regarding treatment of anal cancer in Missouri for the 10 year period from 1975 to 1985 (Table 3). The Kaplan-Mier Actuarial Method was used to estimate survival.[20]

Results

The high incidence of locally advanced disease in this group was often due to neglect on the part of the patient, as evidenced by the delay between the appearance of symptoms and the time of diagnosis. The records of 58 patients contained accurate information as to the delay in diagnosis, which ranged from one to 30 months, with an average of 7.1 months. Among this group of patients, 20% delayed their diagnosis and treatment longer than 12 months after their first symptoms appeared. Eight of 12 patients were dead of disease less than one year after diagnosis. Among the 63 patients in this report, 14 patients were deemed incurable on initial assessment. Two of them received palliative AP resection, four were given palliative radiotherapy, six received no specific treatment for their cancer other than a colostomy, and two received no treatment at all. Among the group for whom potentially curative therapy was deemed possible, two underwent local excision, one of whom had an in situ carcinoma, and the other had refused AP resection. Both of these patients are long-term survivors. The incidence of groin metastases was 8% (5/63) for the entire group. Groin dissections for palpable nodes was performed in three of these five patients. Prophylactic lymphadenectomy (non-palpable nodes) was performed on 11 patients, two of whom had metastases (18%).

Twelve patients experienced major complications for a morbidity rate of 24.5% (Table 2). Three patients (6% operative mortality) died at two, four and 12 days postoperatively due to myocardial infarction, pulmonary embolism and pneumonia, respectively. Excluding the two patients with distant metastases in whom AP resections were performed for palliative purposes, the five-year actuarial survival was 55% (26/47) and the crude survival was 46.8% (22/47). Figure 1 shows the actuarial survival curve for all patients in this study. The overall five-year survival was 43.3%, and 10-year survival was 33.3%.

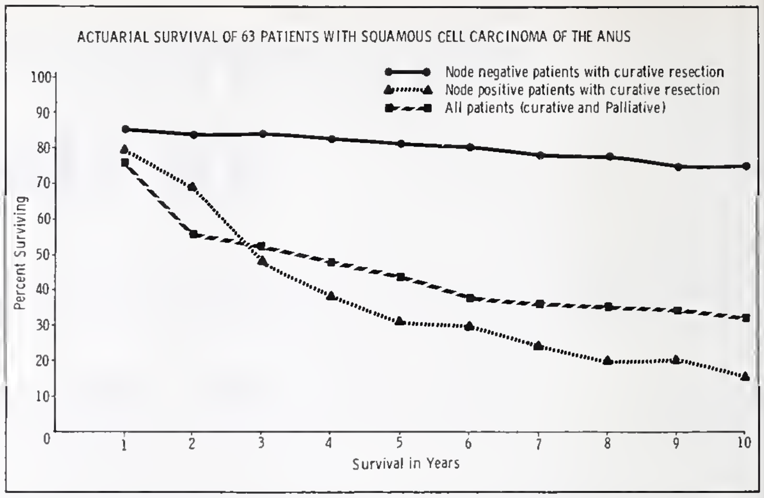

Fig 1.

Among the 49 patients who underwent surgery with curative intent, 19 patients died of recurrent disease. Their survival ranged between three months and seven years, with an average of 22.6 months and a median of 22 months. Seventeen patients died of causes other than the anal carcinoma. Survival in this group of patients ranged between 11 months and 20 years, with an average of 7.3 years. Ten of 17 patients in this subgroup survived five years (58.8%), and 15 of 17 survived three years (88.2%). The causes of death were cardiovascular in six, cerebrovascular in five and unrelated cancers in four. One other patient died as a result of an automobile accident and one died following other surgery performed elsewhere. At the time of this writing, 10 patients are alive and well between 11 and 22 years after their radical pelvic surgery, with an average follow-up of 14.7 years.

Figure 1 also depicts the significance of nodal metastasis in relation to survival in this group of radically treated patients. Among 21 patients with positive nodes who were eligible for five-year follow-up, seven survived for a 33.3% five-year actuarial survival, and 15.7% 10-year survival. By contrast, of the 16 patients with negative nodes eligible for five-year follow-up, 13 survived for an 81.2% five-year actuarial survival and a 76.9% 10-year survival.

Discussion

The incidence, sex ratio, age at presentation and biological behavior of anal cancer may be changing. A higher proportion of young men are being diagnosed with this disease, and anal intercourse has been identified as a risk factor.[21] Another change appears to be taking place in the primary approach to treatment in these patients. The current literature strongly suggests that the long-term results of radical surgery can be markedly improved, with preservation of anorectal function, by utilizing neo-adjuvant chemotherapy in combination with radiotherapy, relegating

Table 2

Modalities of Management for Anal Cancer
The Ellis Fischel Experience 1941-1981

Treatment	*No. Patients*	*Percent*
Radical Surgery		
Posterior Pelvic Exenteration	2	3.1
Abdominioperineal Resection (APR)	37	58.8
Abdominioperineal with Vaginectomy	10	15.9
Local Excision	2	3.1
Operative Mobidity	12/49	24.5
Operative Mortality	3/49	6.0
Causes		
Postoperative bleeding	2	
Wound Sepsis	3	
Pneumonia	2 (1 death)	
Enteroperineal fistula	1	
Perineal dehiscence	1	
Pulmonary embolism	1 (1 death)	
Myocardial infarction	1 (1 death)	
Prolonged bladder dysfunction	1	
Palliative Treatment		
Radiotherapy	4	6.4
Colostomy Only	6	9.6
No Treatment	2	3.1
TOTAL	63	100%

radical surgery to a salvage procedure.

Squamous cell carcinoma of the anus has been a neglected subject over the years. Controversy remains regarding its anatomical definition and the significance of its pathologic variants.

The anal region extends from the anorectal ring to the perianal skin. The transitional epithelium, which is located above the dentate or pectinate line, is regarded as the site of the anal canal.[22] The anal margin begins at the level of the dentate line and extends to the perianal skin in an arbitrarily chosen area which covers a distance of 5cm from the mucocutaneous junction.[23] Cancers of the anal canal have been thought to be biologically more aggressive than cancers of the anal margin.[22, 24] In practical terms, this issue is irrelevant because the management of cancers located in both regions is essentially the same.

The confusing histological terminology has also added an element of controversy to the understanding of this neoplasm. There is general agreement that high tumor grade and malignant variants such as small cell anaplastic basaloid, pseudoadenoid cystic carcinoma, and mucoepidermoid carcinomas, have poor prognoses.[8, 25] In 1985, Dougherty and Evans[26] reviewed 79 cases from the M.D. Anderson Hospital. On the basis of histologic evaluation, and with the exception of the above subtypes, there were no significant differences in survival. The histologic categories also did not differ significantly in regard to the rates of lymph node metastasis or local recurrence. They concluded that histological variants such as basaloid, cloacogenic or transitional cell carcinomas cannot be separated from squamous cell carcinoma and suggested that these terms be eliminated. It seems, therefore, that the factors which significantly affect prognosis in squamous cell carcinoma of the anus include delay in diagnosis and treatment,[27] the depth of infiltration and other elements of invasion related to disease stage, the presence of nodal spread (particularly synchronous iliac and inguinal node metastases) and the poor differentiation common to the aggressive histological variants mentioned above. Our data show a remarkable five- and ten-year survival difference between patients with and without nodal metastases, regardless of the size and location of the primary tumor. This suggests that spread to regional lymphatics may be the most important determinant of survival.

A large proportion of the literature concerning the treatment of anal cancer is based on retrospective analyses of AP resections. Our data, which are derived from a study of the surgical treatment of anal cancer at a locally advanced stage, compare well with the rest of the literature, and our five-year survival rate is similar to the collected results. In general, however, it can be said with certainty that the long-term results of radical surgery for carcinoma of the anal region have not dramatically improved over the last few decades. Improvements in survival are secondary to decreasing operative morbidity and mortality due to improved perioperative management, nutritional support, and the availability of safe, broad-spectrum

Table 3

Treatment of Squamous Cell Carcinoma of the Anus in Missouri
Ten Year Data from The Missouri Cancer Registry

Treatment Modality	*1975-1979 Number (Percent)*	*1980-1985 Number (Percent)*	*Total 1975-1985 Number (Percent)*
Surgery	21 (68)	39 (62)	60 (64)
Radiotherapy	5 (16)	9 (14)	14 (15)
Chemotherapy	1 (3)	3 (5)	4 (4)
Multimodality	0 (0)	6 (9.5)	6 (6)
No Therapy	4 (13)	6 (9.5)	10 (11)
TOTAL	31 (100)	63 (100)	94 (100)

antibiotics. In a 1963 study of cancers of the anal region reported from a combined Ellis Fischel/Barnes Hospital experience,[6] the absolute five-year survival among patients having AP resection as a curative procedure was 58%, not significantly different from our long-term results in patients treated during the past 20 years.

There is a role for conservative surgery for early stages of cancer of the anus. Small tumors can be excised with adequate cancer-free tissue margins while preserving rectoanal function. Beahrs and Wilson[23] showed a 100% survival in patients with superficial lesions of the perianal skin who were treated with local excision. The Memorial Hospital experience, as reported by Stearns, et al,[2] also suggests that local excision of noninfiltrating small lesions can be successfully managed, provided frequent follow-up observation is exercised with these patients. While we advocate groin dissection in the presence of palpably enlarged nodes, our data are in concert with those who do not support prophylactic lymph node dissection for anal cancer.[6]

The field of radiation therapy has made significant strides in the management of these lesions. Cummings, et al,[10] from Canada have obtained five-year survival results in the range of 60%, and Papillon,[9] from France, who uses a more elaborate technique combining interstitial radiation and external beam cobalt therapy, has demonstrated a five-year disease-free survival rate of 68%. The use of pre- or postoperative radiation therapy in the management of this malignancy has been the subject of sporadic reports with a very limited number of patients. While some endorse the combined treatment approach,[28] the use of postoperative radiation therapy has generally been advocated for the management of patients with residual tumor following radical surgery or in the preoperative period for unresectable tumors or borderline operable lesions. This, however, remains controversial.[29]

Fourteen years have now elapsed since the landmark contribution by Nigro, et al,[11] appeared in the literature. Their treatment consisted of administering chemotherapy and radiation concurrently. Patients were given 5-fluorouracil, 25 mg per kilogram of body weight in a continuous 24-hour infusion for five days. On the first day of treatment, the patients were also given mitomycin-C, 0.5 mg per kilogram of body weight. The radiation therapy consisted of 3,000 rads whole pelvic dose calculated to the mid-plane and delivered in 15 treatments of 200 rads each during a three-week period. The remarkable results obtained were corroborated by the absence of viable tumor at the time of AP resections performed on two of the three patients. Ten years later, an analysis of multimodality management in 104 patients was reported by Nigro,[30] showing that there was no gross tumor remaining in the anal canal in 97 patients.

Utilizing combination programs consisting of mitomycin-C, 10 mg to 15 mg per meter square of body surface, and 5-fluorouracil, 750 mg to 1000 mg per meter square, plus 3,000 to 5,000 rads to the pelvis over six weeks, several investigators have recently reported similarly rewarding results. Enker, et al, [31] studied 78 patients with primary epidermoid carcinoma of the anus, 44 of whom were treated with the chemotherapy/radiotherapy protocol. With a median follow-up of 39 months, 75% of these patients had no evidence of disease while only 50% of 34 patients in a nonprotocol group, consisting primarily of AP resections, remained disease free.

Sischy[15] reported in 1985 on 33 patients treated since 1976 with a radiotherapy dose increased to 4,500 rads. Only four of these patients underwent planned AP resection following therapy, and the operative specimens in all four patients were negative for tumor. In the remaining 29 patients treated without surgery, local control was achieved in 89.6%. At five years, an 84.9% local control rate was reported, with 63.7% survival.

Similar results have been reported by several other investigators evaluating smaller patient populations. These included a recent report by Meeker, et al,[32] in a multi-institutional effort where a group of 19 patients were treated between 1979 and 1985 with a complete response rate of 88% and an actuarial disease-free survival at 40 months of 87.5%. Not only has this combined modality approach changed the patterns of care in the management of this disease, but it appears to offer a definitive alternative to surgery alone or radiotherapy alone. In addition, this combined effort has, so far, produced the best local control and survival rates to date. A recent report by John, et al,[33] suggests that even patients with residual disease following chemo-radiotherapy combination can be salvaged with additional courses of chemotherapy and radiation.

A preliminary experience utilizing this multimodality treatment in a small number of patients at our center has led to the following results: three patients remained free of disease at a median follow-up period of more than two years; disease persisted in two other patients who underwent AP resection following chemo-radiotherapy, and the disease was controlled in both patients. One additional patient has failed systemically. Long-term follow-up will be necessary from the institutions that have accured a significant number of patients with carcinoma of the anus to demonstrate the late recurrences will not appear. It has been our observation, albeit anecdotal, that locally advanced lesions with deep penetration of adjacent tissues do not respond well to chemo-radiotherapy. It is interesting to note that Nigro's review[30] reveals that persistent tumor in the surgical specimen was found in penetrating lesions measuring 5 cm to 8 cm prior to treatment. While the pioneeers of this combined effort continue to claim excellent results, most institutions with a smaller number of patients have not achieved the same length of follow-up observation. The results of combined modality management are so convincing, however, that we recommend the multimodality approach for all patients with squamous cell carcinoma of the anus with the exception of those with very early invasive lesions that can be successfully excised with tumor-free margins and preservation of anorectal function.

Data provided by the Missouri Cancer Registry (MCR) indicate that the combined modality approach is gaining favor in Missouri. The MCR receives data from hospitals throughout Missouri; however, not every hospital contributes information. Therefore, MCR figures cannot be extrapolated to reflect the entire state's experience. From 1975 to 1985, 94 cases of anal carcinoma were reported to the registry (Table 3). In the five-year period between 1975 and 1979, 21 of 31 patients were treated by radical surgery. No patient was treated with a multimodality approach. By contrast, from 1980 to 1985, 10% of the cases (6/63) reported were treated with a multimodality approach, although surgery still remained the most frequent form of therapy. It is important to realize that the multimodality management of anal cancer is no longer experimental. There is ample evidence to demonstrate the superiority of chemo-radiotherapy over radical surgery alone. Further experience at national and local levels may continue to influence the therapeutic approach to this malignancy.

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Mushroom Toxicity

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The ingestion of poisonous mushrooms can cause quite varied effects, from mild gastrointestinal upset to death, depending on the toxins they contain. Knowledge of the most common signs and symptoms can prevent severe illness, or even death, that might otherwise prove to be a confusing and unusual clinical presentation.

Mushrooms have been eaten by humans probably as long as any other vegetable food source. However, the ability to distinguish safe from poisonous mushrooms is not an instinct possessed by man or any other mammal. Rather, cultures inclined to use fungi as food have learned by trial and error which fungi can be eaten safely, and have made this knowledge part of their heritage. Despite the usual over-cautiousness that goes with such knowledge, deaths from mistaken identity have occurred to even the most experienced mushroom collectors; in societies where mushroom hunting is more a hobby, the danger of severe mycetism (mushroom poisoning) is even greater.

Mushroom poisoning is not a serious health problem, especially in the United States. Deaths worldwide probably total less than 50 per year; deaths in the U.S. rarely number more than five over the same period.[1] However, mushroom toxicity has medical significance for the following reasons: 1) Cases of severe toxicity are expected to increase in the United States over the next few years due to recent transplantation of deadly European species to U.S. soil; 2) Intoxication with certain common mushrooms closely resembles toxicity from various pharmaceuticals, and can be treated as are overdosages with those drugs; and 3) Morbidity and mortality can be prevented with the realization that some mushroom toxins have delayed effects that may strike an asymptomatic person apparently recovered from acute mushroom intoxication.

Cases of mushroom toxicity can be categorized both by the type of person involved, and the particular toxin ingested. Figure 1 is a table displaying the types of cases of mycetism at a university hospital during a 30-year period. The distribution of cases is probably similar to that found nationwide. The following generalizations can be made: death or intoxication with a deadly toxin is rare; the most common victims of poisonings are amateur mushroom hunters; and, seekers of psychedelic fungi tend to get what they are looking for (even if it does cause them ill effects).

Types of Poisoning

Mushroom toxicity can present with diverse clinical, pathological, and pharmaceutical manifestations. However, the toxins causing mycetism can be conveniently grouped into six categories: muscarine, coprine, ibotinic acid, psilocybin, monomethyl hydralazine, and the cyclopeptides. A brief discussion of each type follows (Figure 2).

Muscarine is a cholinergic agonist first isolated from the species *Amanita muscaria*, whence it got its name. This etymology is unfortunate, as *A. muscaria* actually contains only minute amounts of muscarine, and the effects of intoxication with *A. muscaria* can actually be exacerbated with atropine administration, a specific antidote for muscarine. The clinical manifestations of muscarine intoxication are classic for parasympathetic (cholinergic) stimulation, making up the so called "PSL syndrome" (perspiration, salivation, and lacrimation). They typically have onset within two hours of ingestion, and can be almost immediately reversed with atropine. At least five of the ten cases of mushroom intoxication that presented to the University of Missouri Hospital were most likely due

POISON	*PERSON* Amateurs	Thrill Seekers	Murder Victims	Toddlers
Deadly Toxins	-	-	-	-
Hallucinogens	-	2	-	-
Muscarinic Agonists	4	-	-	-
GI Irritants	2	-	-	2

Fig 1. Cases of mushroom poisoning at the University of Missouri-Columbia medical center during a 30-year period.

to this toxin. Although the attending and housestaff in every case made the common mistake of attributing the symptoms to *A. muscaria* (instead of what was probably an *Inocybe* or *Clitocybe* species), their use of atropine to counteract the symptoms was entirely appropriate. Intoxication from muscarine has probably always been the most familiar type of mushroom toxicity, and as a result atropine is sometimes mistakenly considered a universal antidote for mushroom poisoning. It should only be given when the symptoms of parasympathetic overload occur.

Ibotinic acid and muscimol are the most important of a group of compounds which cause euphoria, intoxication, and visual hallucinations. *Amanita muscaria* (the familiar red capped mushroom with white spots seen in the illustrations of childrens' stories) and *Amanita pantherina* are the two mushrooms most typically involved in poisonings. These mushrooms are sought for their mood altering and hallucinogenic effects, but they also commonly contain compounds with anticholinergic action. Symptoms again have onset within two hours of ingestion. Treatment is symptomatic — physostigmine may be given if anticholinergic effects predominate.

Psilocybin (and the related compound psilocin) is the psychoactive ingredient of the "magic mushrooms" used for centuries in American Indian ceremonies, and more recently by others as recreational drugs. Its effects primarily are elevated mood, visual hallucinations, confusion, and apprehension. It is found in species of the genera *Psilocybe, Paneolus,* and *Conocybe,* which are small brown mushrooms that grow on dung or in fields. Ingestion of 15 fresh mushrooms is sufficient to produce the hallucinogenic effect, but the drug is usually taken in a dried or powdered form.[2] Positive identification of these mushrooms is difficult due to their small size and nondescript form and color. Specimens of "magic mushrooms" sold on the street have, in some cases, been proven to be common edible varieties laced with LSD.[3] Treatment of symptoms can be achieved with antianxietals, and, if necessary, anticonvulsants and antipsychotics. The effects of these mushrooms are felt to be transient, although there are reports of premature senility in some Indians who used them chronically,[4] and in one instance an individual had onset of diagnosed schizophrenia with an episode of *Psilocybe* ingestion.[5]

TOXIN	SYMPTOMS	GENERA
Muscarine	Sweating, salivation, bradycardia, watery diarrhea	Clitocybe Inocybe
Coprine	Flushing, metallic taste, N/V, tachycardia, dyspnea	Coprinus Clitocybe
Ibotinic Acid	Dizziness, ataxia, muscular jerking, hallucinations	Amanita
Psilocybin	Mood elevation, apprehension, hallucinations, drowsiness	Psilocybe
Monomethylhydrazine	Diarrhea, N/V, convulsions, cramps, coma, death	Gyromitra
Cyclopeptides	Diarrhea, N/V, later - liver & renal failure, death	Amanita Galerina

Fig 2. Mushroom toxins, their physical manifestatioins, and common genera that contain them.

Monomethylhydrazine (MMH) is a toxin found in mushrooms of the *Gyromitra* genus (also known as the "false morels"), as well as in certain rocket propellants. Like the antituberculous drug isoniazid, it is an antagonist of pyridoxal phosphate dependent reactions. Poisoning from MMH can be treated with pyridoxine in a manner analogous to INH overdosage. Monomethylhydrazine intoxication is potentially fatal. Death, when it occurs, comes one to a few days after ingestion. Symptoms of gastroenteritis begin six to 12 hours after ingestion, and occasionally, hemolysis, hepatic, and renal failure ensue, especially if adequate hydration and electrolyte balance are not maintained. Methemoglobin may be found in the blood early in the course of poisoning, and can be used as an indicator of MMH exposure.[6] Parboiling the mushrooms can remove the toxins as long as the cooking water is discarded.

The final category of mycotoxins, the cyclopeptides, are the best known and deadliest of the mushroom poisons, accounting for 90% to 95% of deaths from mushroom ingestion.[7] Included in this group are amatoxins and phallotoxins, which are found in the *Amanita* and *Galerina* genera. The infamous "Death Cap" *(Amanita phalloides),* and "Destroying Angel" *(Amanita verna)* are the *Amanita* species most commonly ingested in fatal poisonings, and, not coincidentally, the most closely studied as well. Of the cyclopeptides, only the amatoxins are felt to be clinically significant; phallotoxins are about 1/20 as toxic as amatoxins, and are inactive when taken orally.[8] The amatoxins work on a cellular level by blocking RNA polymerase and, consequently, DNA transcription and protein synthesis.[9]

Amatoxin intoxication follows a characteristic course: the victim is typically symptom-free for six to 24 hours, and then has onset of abdominal pain, vomiting, and diarrhea, which usually last a day. As gastrointestinal symptoms abate, the victim commonly appears to have recovered completely. However, it is during this period that renal and hepatic failure, set in motion by the early cytotoxic effects of the amatoxins, finally become manifest. Kidney dysfunction can appear as soon as the third day and liver failure the fourth day following ingestion. Death occurs commonly in hepatic coma, with overlying sepsis or electrolyte imbalance.

Legend has it that Emperor Claudius I. of Rome was assassinated by a poisonous mushroom, usually identified as an *Amanita* species, but accounts of his death give a time course of only a few hours, inconsistent with *Amanita* toxicity.[10] It is more likely he ingested an edible mushroom laced with a fast-acting poison. Amatoxin intoxication clinically resembles acetaminophen overdosage in that hepatic failure appears after a period of apparent improvement. Both situations commonly have a component of renal failure, although the renal involvement in amatoxin poisoning is the result of a direct toxic effect on the renal tubules,[11] usually exacerbated by dehydration.

Treatment of amatoxin toxicity is controversial as there is no simple antidote. All investigators agree that close monitoring in an intensive care unit setting is mandatory, as is meticulous attention to fluid and electrolyte status. The development of oliguric renal failure should be avoided with forced diuresis, if necessary. Prevention of hypoglycemia due to liver failure can be achieved with IV dextrose solution. Ideally, absorption of the toxin from the gastrointestinal tract should be prevented, using induced emesis and activated charcoal. However, as presentation of most *Amanita* intoxications occurs after a latent period, when the patient has recovered from the initial gastroenteritis, treatment also must be directed at both removing the toxin from the bloodstream, and blunting its damaging effects to the liver and kidneys. Charcoal hemoperfusion, plasma exchange, forced diuresis, and high dose penicillin G have all been used with varying success to remove the toxin from the circulation.[12] Thioctic acid and corticosteroids are experimental therapies purported to reduce the destruction of hepatic and renal parenchyma by amatoxin.[13] Thioctic acid (alpha-lipoic acid), a component of coenzymes involved in the Kreb's cycle, is especially promising in this regard. One series reported near 100% survival using this drug,[14] while other authors have more recently questioned its benefit.[15, 16] Early administration and prevention of hypoglycemia seem to be important in enhancing its effectiveness.[17]

Poisonous Mushrooms of Missouri

The Midwest lacks the reputation as a mushroom haven that the East and West Coasts enjoy. And while it is true that the harsher and somewhat dry climate of the Mississippi Valley is not conducive to large populations of mushrooms, examples of fungi from most of the major genera, including all of the potentially toxic ones mentioned above, can be found in Missouri and contiguous states. Mushroom hunting commonly occurs between April 1 and December 1 of the year, but each particular species has a more limited growing period.

Of the poisonous mushrooms, the *Gyromitra* species ("false morel") tend to appear first in the early spring along with the true morels, with which they are often confused. May brings the familiar *Coprinus* species ("inky caps") to woods and cultivated lawns. June through October is typically the period of fungal abundance in the state: virtually all indigenous mushrooms can be found during moist conditions. It is during this period that the deadly *Amanita* species appear, especially *A. verna*. Although *A. phalloides* has been reported in Missouri, this identification is in doubt, as there is evidence that *A. phalloides*, commonly found growing in Europe, has only recently been transplanted to the eastern U.S. in imported plant soil.[18] The other more common, but less poisonous species, such as *A. muscaria*, the *Inocybe* and *Clitocybe* species, and the psilocybin containing mushrooms, are also found during the summer months, when they typically cause poisonings during outings or picnics. Mushrooms can retain edibility, as well as toxicity, despite freezing, making mycetism potentially a year round problem.

Treatment and Therapy

Ideally, a patient suffering mushroom poisoning would present with a clear history of mushroom ingestion, and with identification of the species as well. In reality, patients poisoned by mushrooms often come with report of having ingested several different foods, or may have mental status changes precluding any clear history at all. In addition, those with the most serious intoxications usually have the most remote history of mushroom ingestion; some may have completely forgotten the mushrooms they ate a few days before. It is important that the physician involved keep mycetism on his or her differential diagnosis for any apparent poisoning with autonomic symptoms or unexplained hepatic or renal failure in an otherwise healthy person. Once the diagnosis is suspected, the following guidelines for treatment should be used:

1. Admit to the hospital for overnight observation.
2. Clean the gastrointestinal tract: induce emesis, lavage the stomach, infuse activated charcoal by nasogastric tube.
3. Attempt to identify the mushroom; collect fragments from the vomitus, send relatives to gather more specimens.
4. Treat symptoms and signs: atropine, physostigmine, diazepam, antipsychotics, anticonvulsants, reassurance, intravenous fluids, etc.
5. Call in specialists: mycologists to aid in mushroom identification, hepatologists and nephrologists for assistance in management. Mushrooms can be speciated by microscopic examination of spores, and by thin layer chro-

matography. Experimental therapies, discussed above, include pyridoxine, thioctic acid, penicillin G, steroids, charcoal hemoperfusion, and liver transplantation, if indicated.

6. Follow up: if onset of symptoms was within two hours of ingestion, poisoning from the deadly species is extremely unlikely. Discharge the next day with return in three to five days to check liver and renal function. If symptoms became apparent only after four or more hours, the patient should be kept in the hospital, well hydrated, and under close scrutiny for evidence of evolving hepatic or renal failure. No patient with such delayed onset of complaints should be sent home until at least five days have passed without change in clinical state. Follow up should include a return in one and two weeks for liver function tests, liver enzymes, and serum BUN and creatinine levels. If these are all normal, the patient is presumably out of the woods.

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The Author

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New Members

■ **Neil F. Benson, M.D.**, #63 Doctor's Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Area Medical Society. Dr. Benson received his preliminary education at the University of South Dakota and obtained his medical degree at the University of South Dakota in 1983. He completed his residency at Halifax Medical Center, Daytona Beach, FL. Dr. Benson specializes in family practice.

■ **Kerry L. Bernardo, M.D.**, Barnes Hospital Plaza, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Bernardo received his preliminary education at the University of California-Irvine and obtained his medical degree at the University of California-Los Angeles in 1981. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Bernardo specializes in neurological surgery.

■ **Kenneth I. Blueston, M.D.**, 9037 W. Swan Circle, St. Louis 63144, has become a member of the St. Louis Metropolitan Medical Society. Dr. Bluestone received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1987. He is completing his residency at Barnes Hospital, St. Louis, MO. Dr. Blueston specializes in anesthesiology.

■ **Michael S. Cardwell, M.D.**, N610, Health Sciences Center, 1 Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Cardwell received his preliminary education at Purdue University and obtained his medical degree at the Indiana University School of Medicine in 1978. He completed his residency at St. Francis Medical Center, Peoria, IL. Dr. Cardwell specializes in obstetrics/gynecology.

■ **David P. Clark, M.D.**, M173 Health Sciences Center, 1 Hospital Drive, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Clark received his preliminary education at the University of Kansas and obtained his medical degree at the University of Colorado Medical Center in 1975. He completed his residency at the University of Missouri-Columbia Hospital and Clinics, Columbia, MO. Dr. Clark specializes in internal medicine.

■ **James W. DeBoard, M.D.**, 1325 South Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. DeBoard obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1976. He completed his residency at North Carolina Memorial Hospital, Chapel Hill, NC. Dr. DeBoard specializes in anesthesiology.

■ **James E. Ebel, M.D.**, 4107 Union Road, St. Louis 63129, has become a member of the St. Louis Metropolitan Medical Society. Dr. Ebel received his preliminary education at Benedictine College and obtained his medical degree at the St. Louis University School of Medicine in 1982. He completed his residency at St. Louis University Hospital, St. Louis, MO. Dr. Ebel specializes in internal medicine.

■ **Vincent P. Fortunato, M.D.**, 3900 South Grand Blvd., St. Louis 63118, has become a member of the St. Louis Metropolitan Medical Society. Dr. Fortunato received his preliminary education at College of the Holy Cross and obtained his medical degree at the Loyola University Stritch Medical School in 1984. He completed his residency at St. Francis Hospital, Chicago, IL. Dr. Fortunato specializes in internal medicine.

■ **Charles D. Glazzard, M.D.**, 1235 Cherokee, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Glazzard received his preliminary education at the University of Michigan and obtained his medical degree at Wayne State University School of Medicine in 1956. He completed his residency at Menninger School of Psychiatry, Topeka, KS. Dr. Glazzard specializes in psychiatry.

■ **John J. Grechus, M.D.**, Truman Medical Center, 2301 Holmes, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Grechus received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC School of Medicine in 1983. He is completing his residency at Truman Medical Center, Kansas City, MO. Dr. Grechus specializes in family practice and obstetrics/gynecology.

■ **James E. Greenwald, M.D.**, Barnes Hospital, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Greenwald obtained his medical degree at Ohio State University School of Medicine in 1983. He completed his residency at Johns Hopkins Hospital, Baltimore, MD. Dr. Greenwald specializes in internal medicine.

■ **Jeffery A. Hardy, M.D.**, 1034 S. Brentwood, St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Hardy obtained his medical degree at the University of Utah School of Medicine in 1984. He completed his residency at St. Louis University Hospitals, St. Louis, MO. Dr. Hardy specializes in radiology.

■ **Marc F. Inciardi, M.D.**, 4949 Rockhill Road, Kansas City 64110, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Inciardi received his preliminary education at Oklahoma State University and obtained his medical degree at the University of Oklahoma School of Medicine in 1979. He completed his residency at the University of Oklahoma Health Sciences Center, Oklahoma City, OK. Dr. Inciardi specializes in radiology.

■ **Max G. Jackson, M.D.**, 2316 E. Meyer Blvd., Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Jackson received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas Medical School in 1972. He completed his residency at the University of Connecticut, Farmington, CT. Dr. Jackson specializes in family practice.

■ **Allan J. Jacobs, M.D.**, 1325 S. Grand Blvd., 4th Floor North, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Jacobs obtained his medical degree at the University of Southern California in 1972. He completed his residency at Parkland Memorial Hospital, Dallas, TX. Dr. Jacobs specializes in obstetrics/gynecology.

■ **Jeffrey A. Matson, M.D.**, 6400 Prospect, Suite 138, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Matson received his preliminary

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ROSALYN P. STERLING-SCOTT, M.D.

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience;* Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

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- Positive direct Coombs' tests have been reported during treatment with cephalosporins
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk Exercise caution in prescribing for these patients

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea). 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%, usually subside within a few days after cessation of therapy Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor No serious sequelae have been reported Antihistamines and corticosteroids appear to enhance resolution of the syndrome
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia

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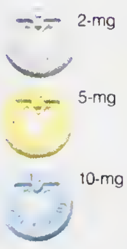
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education at the University of Kansas and obtained his medical degree at the University of Kansas Medical School in 1982. He completed his residency at North Carolina Memorial Hospital, Chapel Hill, NC. Dr. Matson specializes in anesthesiology.

■ **Frank H. McGinty, M.D.,** #35 Doctor's Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Area Medical Society. Dr. McGinty received his preliminary education at Southeast Missouri State University and obtained his medical degree at the University of Missouri-Kansas City in 1983. He completed his residency at the University of Tennessee, Memphis, TN. Dr. McGinty specializes in surgery.

■ **John P. Murphy, M.D.,** 4400 Broadway, Suite 509, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. He received his preliminary education at the University of Kansas and obtained his medical degree at the Kansas University School of Medicine in 1977. He completed his residency at the Kansas University Medical Center, Kansas City, KS. Dr. Murphy specializes in pediatric surgery and urology.

■ **Blase J. Pignotti, M.D.,** 621 South New Ballas Road, Suite 7011, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Pignotti obtained his medical degree at the University of Illinois in 1982. He completed his residency at St. John's Mercy Medical Center, St. Louis, MO. Dr. Pignotti specializes in obstetrics/gynecology.

■ **John J. Sand, M.D.,** 6420 Prospect, Suite T-417, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Sand received his preliminary education at Creighton University and obtained his medical degree at the University of Iowa College of Medicine in 1982. He completed his residency at the University of Iowa Hospitals, Iowa City, Iowa. Dr. Sand specializes in neurology.

■ **Tania L. Schmid, M.D.,** 2160 1st Ave., Maywood, IL 60153, has become a member of the St. Louis Metropolitan Medical Society. Dr. Schmid received her preliminary education at the University of Mississippi and obtained her medical degree at the University of Mississippi Medical Center in 1985. She completed her residency at Loyola University Medical Center, Chicago, IL. Dr. Schmid specializes in internal medicine.

■ **George A. Williams, M.D.,** 915 N. Grand Ave., St. Louis 63106, has become a member of the St. Louis Metropolitan Medical Society. Dr. Williams received his preliminary education at the University of Notre Dame and obtained his medical degree at the Medical College of Wisconsin in 1972. He completed his residency at the Medical College of Wisconsin, Milwaukee, WI. Dr. Williams specializes in internal medicine.

■ STUDENT MEMBERS

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Medical School News

The University of Missouri-Columbia

■ **Lester R. Bryant, M.D.,** has been named the dean of the School of Medicine. Dr. Bryant is vice president for health sciences and dean of the School of Medicine at Marshall University in Huntington, WV. Mizzou Chancellor Haskell Monroe said, "Dr. Bryant has been a very successful and progressive dean at a major university's medical center, and we are proud that someone of his caliber will be leading our School of Medicine." Dr. Bryant is a thoracic surgeon and a Louisville, KY, native. The new dean will start at the school in January.

■ **E. Lee Forker, M.D.,** research professor of medicine and physiology, has been awarded a MERIT grant from the National Institutes of Health to continue his studies of the excretory function of the liver. The award, renewable for 10 years, will total almost $1.2 million in the first five years. Dr. Forker, who has been studying the mechanisms of bile formation with NIH support since 1965, is on the editorial board of the America Journal of Physiology, is a member of the Scientific Advisory Committee of the Yale University NIH Liver Center, has been elected into the Association of American Physicians, was a Markle Scholar in Academic Medicine, is past president of the American Association for the Study of Liver Disease and won Mizzou's Chancellor's Award for Best Research in Biological Science in 1983.

■ **David B. Bylund, Ph.D.,** professor of pharmacology, has contributed a chapter, "Alpha-2 adrenergic receptors: A historical perspective," to *The Alpha-2 Adrenergic Receptors,* Lee Limbird, editor, published this year by Humana Press.

■ **Paul Kaplan, M.D.,** professor and chairman of the Department of Physical Medicine and Rehabilitation, has accepted a position as alternate editor of the Archives of Physical Medicine and Rehabilitation, the monthly periodical published by the American Congress of Rehabilitation Medicine and the American Academy of Physical Medicine and Rehabilitation. Dr. Kaplan also was the chairman of the second annual Rusk Lectureship in August in Columbia. The program, titled "Sports Injuries of the Back, Neck and Shoulder: Physiatric, Surgical and Physical Therapy Perspectives," was sponsored by Dr. Kaplan's department, the School of Medicine and University Extension. **William Corwin Allen, M.D.,** professor of surgery, presented "New Developments in Surgical Treatment of the Sports-Injured Shoulder."

■ **G.W.N. Eggers Jr., M.D.,** professor and chairman of the Department of Anesthesiology, has been appointed to the Residency Review Committee for Anesthesiology of the Accreditation Council for Graduate Medical Education. His term begins in April.

■ **Nilakshi Gupta, M.D., George R. Kracke, Ph.D., Alice L. Landrum, M.D.,** and **Eugene R. Worth, Ph.D.,** have joined the Department of Anesthesiology as assistant professors. Dr. Gupta was on the faculty at the University of Pittsburgh and worked at MaGee Women's Hospital. Dr. Kracke had been a research associate at Syracuse University. Dr. Landrum is a 1980 graduate of the University of Arkansas School of Medicine in Little Rock and has been in private practice in Wichita, KS. Dr. Worth, who received his degree and did his residency at the University of Missouri-Columbia, had been in private practice in Springfield, MO.

■ **Marilyn R. James-Kracke, Ph.D.,** has joined the Department of Pharmacology as an assistant professor. She had been at SUNY-Buffalo.

■ **Javad H. Kashani, M.D.,** professor of psychiatry, published results of his study of anxiety disorders in a community sample of adolescents in the August *American Journal of Psychiatry.*

■ **Clark Watts, M.D.,** professor of surgery and chief of the division of neurosurgery, has been appointed to a four-year term on the National Board of Medical Examiners as a representative of the Council of Medical Specialty Societies.

■ **James M. A. Weiss, M.D.,** professor and chairman of the Department of Psychiatry, served as visiting professor of psychiatry at the University of Texas Medical Branch in Galveston for a week in July. Dr. Weiss was the main speaker at that department's Grand Rounds.

■ **Anne Winkler, M.D.,** served a three-month postdoctoral fellowship in rheumatology in the Department of Medical Cell Genetics at the Karolinska Institute in Sweden this summer.

■ The following members of the Department of Physical Medicine and Rehabilitation have been selected for poster presentations at the annual joint meeting of the American Academy of Physical Medicine and Rehabilitation Medicine Oct. 31-Nov. 4 in Seattle: **Daniel A. Saviers, M.D.,** resident physician, and **Robert Conway, M.D.,** clinical assistant professor, will present "Suprascapular Neuropathy Associated with Carotid Endarterectomy"; **Susan P. Buckelew, Ph.D.,** assistant professor, and **Karen Baumstark,** graduate research assistant, will have two presentations, "Neuropsychological Assessments Following Spinal Cord Injury" and "Videotaped Behavioral Pain Measures."

■ The Department of Surgery is planning a reception for the School of Medicine surgical alumni, Missouri surgeons and current or former faculty from 7-9 p.m. Oct. 24 at the Chicago Hilton and Towers. The reception will be in conjunction with the meeting of the American College of Surgeons.

■ The Department of Obstetrics and Gynecology has opened a Center for Fertility and Cryobiology as its new Green Meadows Clinic. All outpatient services have been moved to the clinic, and the fertility center offers complete infertility management for males and females. Board certified gynecologists, reproductive endocrinologists and urologists will be complemented by a full support staff including doctoral-level experts in andrology and embryology.

University of Missouri-Kansas City

■ Provost emeritus **E. Grey Dimond, M.D.,** is author of an article that appeared in the Aug. 19 issue of the *Journal of the American Medical Association,* which details the successes of UMKC's six-year medical-school program. The article, titled, "The UMKC Medical Education Experiment," describes the school which opened in 1971. UMKC admits students directly from high school for the program that integrates liberal arts with basic and clinical sciences and provides early exposure to patient care. Students are between ages 18 to 24, the prime formative years, when attitude, adult character patterns, personal ethics, and behavior are established subject to direction and guidance. This guidance is accomplished through small-group instruction by clinicians, called docents.

The issue also includes an editorial on the six-year program by **Dr. Sherman M. Mellinkoff,** dean emeritus of the University of California-Los Angeles School of Medicine. In his editorial, Dr. Mellinkoff says, "In 1971, an experiment was launched at UMKC. The prime mover, **E. Grey Dimond, M.D.,** showed courage, ingenuity and skill in engineering changes sufficiently original to rouse . . . skepticism. Dr. Dimond is to be congratulated on creating an experiment from which medical education can learn."

In answering the question "How has the UMKC experiment worked?" Dr. Mellinkoff wrote, "Graduates tend to obtain residencies of their choice and are generally regarded as good performers in their residencies."

- **Charles Wilkinson, M.D.,** professor and executive director of the Greater Kansas City Mental Health Foundation recently was awarded the *National Medical Association's E.Y. Williams, M.D., Senior Clinical Scholar Award.* The award, for outstanding contributions to medicine, was presented to Dr. Wilkinson at the group's meeting in Los Angeles in August.

- **James J. Hamilton M.D.,** was elected president of Truman Medical Center's Medical/Dental staff. Dr. Hamilton is also chairman of the Department of Orthopaedic Surgery, chairman of TMC's Quality Assurance Committee, and president of the Missouri State Orthopaedic Association.

- **Dipak C. Shah, M.D.,** assistant professor of radiology, this fall was presented with UMKC's *Elmer P. Pierson Teaching Award,* which was presented during the University's 1988 Faculty/Staff Awards Convocation.

- **Harry R. Gibbs, M.D.,** senior docent and assistant professor, is author of an article, "Diet Pills and Sudden Death," which appeared in the "Correspondence" section of the April 28 issue of *The New England Journal of Medicine.*

- Four new docents recently joined the staffs of UMKC School of Medicine and Truman Medical Center. Cardiologist **Keith M. Atassi, M.D.,** is docent on the school's Red-8 student unit and assistant professor. He recently completed his cardiology fellowship at Mount Sinai Medical Center, Milwaukee, WI. Prior to that, he was a heart and hypertension research fellow at the Cleveland Clinic Foundation Hospital. **Sandra K. Ediger, D.O.,** and **Marilyn G. Foreman, M.D.,** are both subspecialists in pulmonary medicine, and docents on the Green-3 and Green-4 units, respectively. **William H. Jennings, M.D.,** a hematologist/oncologist, most recently has been associated with Greeley Medical Clinic and North Colorado Medical Center in Greeley, CO, and McKee Medical Center in Loveland, CO.

- Two full-time faculty members recently joined Truman Medical Center's Department of Pathology. **Ila M. Person, M.D.,** and **Edward R. Friedlander, M.D.,** are both assistant professors at TMC, which is UMKC's primary teaching hospital.

- Fifth-year medical student **Stephanie Gillard** was awarded a $2,400 grant by the Joseph Collins Foundation. The award goes to a student with financial need who is interested in general practice and the fine arts.

St. Louis University

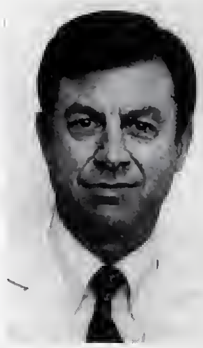
- **William A. Sly, M.D.,** professor and chairman of the Edward A. Doisy Department of Biochemistry and Molecular Biology at the St. Louis University School of Medicine has received two grants totaling $1,090,198 for his research on carbonic anhydrase deficiencies.

The National Institute of Diabetes and Digestive and Kidney Diseases awarded a five-year, $990,198 grant for a project, titled "Biochemical Genetics of Carbonic Anhydrase Deficiencies." The study concerns the biochemical and molecular genetics of carbonic anhydrase (CA) and efforts to identify disorders resulting from deficiencies of other members of the CA gene family.

The March of Dimes Birth Defects Foundation has approved a two-year, $100,000 grant that supports clinical research on patients with CA II deficiency and carries out physiological studies on a recently identified mouse mutant with CA II deficiency.

Dr. Sly earned his medical degree in 1957 from St. Louis University School of Medicine. He served an internship and residency in Ward Medicine at Barnes Hospital. Dr. Sly was appointed to the staff of St. Louis University School of Medicine in 1984.

- **J. Heinrich Joist, M.D., Ph.D.,** professor of pathology and director of hematology at St. Louis University School of Medicine, has been awarded a one-year, $11,200 grant from Baxter, Travenol Laboratories, through the Regional Red Cross Blood Center, St. Louis. The grant will fund an evaluation of ultraviolet (UV) irradiated platelets in patients with abnormal bleeding who have low platelet counts due to impaired platelet production. The study will involve paired transfusions of UV-irradiated and regular (non-irradiated) single donor platelets to adults over the age of 18 with aplastic anemia, leukemia, or myelodysplastic syndromes.



Dr. Joist has also received a $48,000 grant from the Bi-State Hemophilia Association, Inc., as continued funding of his research on the role of platelets in the development of hemophilic synovitis, an inflammation of the inner lining of the joints that is thought to lead to crippling joint destruction in people with hemophilia.

Dr. Joist received his medical degree in 1961 from the University of Cologne School of Medicine, West Germany. In 1977, he earned a doctorate of philosophy from McMaster University, Hamilton, Canada. Dr. Joist joined St. Louis University in 1978.

- **Maurice Green, Ph.D.,** professor and chairman of the Institute of Molecular Virology, St. Louis University School of Medicine, has been awarded a three-year grant totalling $403,527 from the National Cancer Institute.

Dr. Green's project is titled "Biochemical Functions of Papillomavirus

Oncogenes," and studies the mechanisms by which a normal cell is converted into a cancer cell.

Dr. Green earned his doctorate in Biochemistry and Chemistry at the University of Wisconsin in 1954. He joined St. Louis University School of Medicine in 1956, and became director of the Institute of Molecular Virology when it was established in 1964. Dr. Green holds a lifetime Research Career Award from the National Institutes of Health.

■ **Christine Gantner Janney, M.D.,** has been named director of surgical pathology at The University Hospital, St. Louis University Medical Center. She will also serve as an assistant professor of pathology at St. Louis University School of Medicine. Janney graduated cum laude from St. Louis University School of Medicine in 1979. She comes to the medical center from Barnes Hospital, where since 1984 she served as director of the bone marrow cytogenetics laboratory.

While at Barnes, she also served as assistant professor of surgical pathology at Washington University School of Medicine. She is the recipient of numerous academic honors, including the Phi Beta Kappa and Alpha Omega Alpha awards. Dr. Janney is a member of the International Academy of Pathology, the American Society of Human Genetics and is a fellow of the College of American Pathologists.

■ **Gregory S. Hageman, Ph.D.,** assistant professor of ophthalmology at St. Louis University School of Medicine, has been selected as a Research to Prevent Blindness-Olga Keith Weiss Scholar. The award was one of five made by Research to Prevent Blindness to assist outstanding scientists in pursuit of ongoing research of unusual significance and promise.

As part of the award, Dr. Hageman received a grant of $30,000 to support his scientific research activities, which are being conducted at the Bethesda Eye Institute. The grant will cover the period from July 1, 1988 to June 30, 1989. Dr. Hageman's research focuses on retinal cell biology.

Dr. Hageman came to the Bethesda Eye Institute and St. Louis University Medical Center in 1987 from the University of Southern California School of Medicine, where he was assistant professor of research anatomy and cell biology. He earned his doctorate degree from the University of Southern California in 1983.

Washington University

■ **Marc R. Hammerman, M.D.,** an associate professor of medicine at Washington University School of Medicine in St. Louis, has received MERIT status from the National Institutes of Health (NIH) for his latest grant.

Hammerman's grant, which will total more than $832,000, is a five-year renewal of funding that he has received since 1980 from the National Institute of Diabetes and Digestive and Kidney Diseases, part of the NIH.

Hammerman is an endocrinologist who specializes in diabetes, kidney disease and other metabolic diseases. With this grant, he is trying to explain biochemical mechanisms that affect renal development and growth. Specifically, he is studying growth hormone and insulin-like growth factors, and how they interact with various cells from the kidney, to determine their role in the control of renal growth.

Hammerman has been on the faculty since 1979, working in the Endocrine and Renal Divisions of the Department of Internal Medicine. He is director of the house staff training program in internal medicine, and is on staff at Barnes and Jewish hospitals, sponsoring institutions of the Washington University Medical Center.

He received the doctor of medicine degree from Washington University in 1972. He is a fellow of the American College of Physicians, and a member of numerous other professional organizations, including the American Physiological Society, the American Society for Clinical Investigation, the American Society of Nephrology, The Endocrine Society and the Juvenile Diabetes Foundation. He holds an established investigatorship with the American Heart Association, and is on the editorial board of the American Journal of Physiology.

■ **Garland R. Marshall, Ph.D.,** professor of pharmacology and biological chemistry at Washington University School of Medicine is the 1988 recipient of the American Chemical Society Award in Medicinal Chemistry.

The award, presented by the Division of Medicinal Chemistry of the American Chemical Society, recognizes Marshall for his pioneering contributions to the field of computer-aided drug design.

Marshall is a leader in the application of computer graphics and molecular modeling in medicinal chemistry. He pioneered the development of computer programs that graphically display models of receptors, which are the targets for drugs, and thus streamline the process researchers use to design drugs.

In 1979 Marshall founded Tripos Associates, the pioneer in molecular modeling software, and served as president and chairman until 1987 when it merged with Evans and Sutherland Computer Company. He continues to serve as chairman of the company's scientific advisory group. In this past year he co-founded and became editor-in-chief of the Journal of Computer-Aided Molecular Design.

Marshall joined the faculty at Washington University in 1966 as an instructor in physiology, biophysics and biological chemistry and in 1976 was named a full professor. He received a bachelor's degree from the California Institute of Technology and a doctoral degree from Rockefeller University in New York.

■ **Susan S. Deusinger, Ph.D.,** associate director for education in the physical therapy program at Washington University School of Medicine in St. Louis, has been named acting director of the physical therapy program.

Deusinger replaces **Steven J. Rose, Ph.D.,** who accepted a position at the University of Miami. Rose had been associate professor and director of both the Program in Physical Therapy and the Department of Physical Therapy at the School of Medicine's Irene Walter Johnson Institute of Rehabilitation (IWJ).

Deusinger joined the faculty in 1978 as a physical therapy instructor and academic coordinator of clinical education. She conducts a doctoral advisory group at the University's George Warren Brown School of Social Work.

In Memoriam

■ **Joseph L. Denner, M.D.,** died August 20, 1988, at the age of 57. Dr. Denner, a psychiatrist, served as staff chief of inpatient psychiatric units, director of residency training and departmental chairman at the University of Kansas School of Medicine's psychiatry department from 1964 to 1974. He was an Army Veteran of the Korean War. He obtained his medical degree in 1960 at Columbia University School of Medicine. Dr. Denner was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Douglas G. Kelling, Sr., M.D.,** died August 2, 1988, at the age of 79. Dr. Kelling specialized in occupational medicine. He practiced medicine in Waverly and was medical director for the General Motors Leeds assembly plant before he retired. He was an Army Veteran of World War II, in which he received a Bronze Star. He was one of the physician liberators of the Nazi concentration camp in Dachau, Germany. He obtained his medical degree in 1933 at St. Louis University. Dr. Kelling was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Richard W. Maxwell, M.D.,** died August 28, 1988, at the age of 77. Dr. Maxwell, an internal medicine specialist, practiced medicine in St. Louis for more than 40 years until his retirement in 1984. He obtained his medical degree in 1936 at the University of Chicago Medical School. Dr. Maxwell was a member of the St. Louis Metropolitan Medical Society.

■ **A. Victor Reese, M.D.,** died July 20, 1988, at the age of 88. Dr. Reese specialized in internal medicine. He practiced medicine in Webster Groves for 55 years until his retirement in 1985. He served on the staffs of Deaconess and St. Joseph's hospitals and St. Mary's Health Center. He obtained his medical degree in 1928 at Washington University. Dr. Reese was a member of the St. Louis Metropolitan Medical Society.

■ **W. B. Spalding, M.D.,** died June 18, 1988, at the age of 95. Dr. Spalding, a general practitioner, practiced medicine in Plattsburg for many years before his retirement in 1973. He was the only medical doctor in Clinton County during World War II. He obtained his medical degree in 1924 at the University of Kansas Medical School. Dr. Spalding was a member of the Clinton County Medical Society.

■ **Theodore Zahorsky, M.D.,** died August 30, 1988, at the age of 86. Dr. Zahorsky, a pediatrician, practiced medicine in St. Louis for more than 44 years until his retirement in 1968. He obtained his medical degree in 1925 at the Washington University School of Medicine. Dr. Zahorsky was a member of the St. Louis Metropolitan Medical Society.

Physician's Recognition Awards

Twenty-five MSMA members qualified for the MSMA-AMA Physician's Recognition Award during August 1988. The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category 1 programs.

Buchanan

Nicholas Bartulica, *St. Joseph*

Richard L. Maginn, *St. Joseph*

Butler-Wayne-Ripley-Carter

Eugene T. Hansbrough, *Poplar Bluff*

Cape Girardeau

Robert B. Russell, *Cape Girardeau*

Clay-Platte

John P. Schutz, *Excelsior Springs*

Franklin-Gasconade-Warren

Sunil M. Apte, *Washington*
James D. Turner, *Washington*

Greene

Jack M. Bagby, *Springfield*
Larry K. Chase, *Springfield*

Jasper

Oman E. Dement, *Joplin*

Metro Med-Greater Kansas City

Gregory B. Barber, *Kansas City*
William F. Bell, *Lee's Summit*

Metro Med (cont.)

Bela Csaki, *Independence*
Janis M. Steinbrecher, *Lee's Summit*

Mid-Missouri

Edward R. Jenkins, *Waynesville*

Northeast

Sandra J. Ahlum, *Hannibal*

Northwest

Wasif F. M. Almuttar, *Maryville*
Walter E. Dean, *Maryville*

Saline

Jack R. Uhrig, *Marshall*

St. Louis Metropolitan

Abd U. Ahadi, *St. Louis*
Shigemasa Ikeda, *St. Louis*
Myo M. Kyaw, *St. Louis*
Horace W. Scott, *St. Louis*
James R. Thomas, *St. Louis*

West Central

Candice A. D. Moore, *Nevada*

Final Disciplinary Actions

At the May 20-21, 1988 meeting of the State Board of Registration for the Healing Arts, the following final disciplinary actions were taken. In addition, the listing includes all reportable actions finalized since the December 5, 1987, and the February 19-20, 1988 meetings that were not included in the last published listing (pg. 326, June 1988 MISSOURI MEDICINE). This information is made available to the public under the provisions of Section 334.101 RSMo.

■ **LEON COGAN, D.O.** *Detroit, Michigan*
Order dated July 22, 1988. Revocation of Missouri license.
Violation: Section 334.100.2(2)RSMo.

■ **RODRIQUE FRANCOIS, M.D.** *St. Louis, Missouri*
Order dated August 1, 1988. Revocation of Missouri license.
Violation: Section 334.103 RSMo.

■ **ROBERT E. HALES, M.D.** *LaBelle, Missouri*
Order dated May 22, 1988. Revocation of Missouri license.
Violation: Section 334.103 RSMo.

■ **WILLIAM R. BONIFACE, M.D.** *Cincinnati, Ohio*
Order dated May 20, 1988. Voluntary surrender.
Violation: Section 334.100.2(2)RSMo.

■ **JONAH S. BOTKNECHT, D.O.** *Miami Beach, Florida*
Order dated May 20, 1988. Voluntary Surrender.
Violation: Section 334.100.2(2)RSMo.

■ **THOMAS COX, JR. M.D.** *Chattanooga, Tennessee*
Order dated May 20, 1988. Voluntary Surrender.
Violation Section 334.100.2(2) RSMo.

■ **ALBERT THILL, M.D.** *Anaheim, California*
Order dated January 25, 1988. Voluntary Surrender.
Violation: Section 334.100.2(2) RSMo.

■ **JOHN BURROUGHS, D.O.** *Bridgeton, Missouri*
Order dated June 20, 1988. Two years probation.
Violation: Section 334.100.2(13)RSMo.

■ **JON TEK LUM, M.D.** *St. Louis, Missouri*
Order dated May 20, 1988. Three years suspension, ten years probation.
Violation: Section 334.100.2(4)(i)RSMo.

■ **NAPOLEON MAMINTA, M.D.** *Chesterfield, Missouri*
Order dated June 6, 1988. Sixty day suspension, three years probation.
Violation: Section 334.103 RSMo.

■ **WALT MUTSCHLER, M.D.** *Edwardsville, Illinois*
Order dated July 1, 1988. Seven day suspension, return to original probation.
Violation: Section 334.100.2(4)(o)RSMo.

■ **ROY MENDELSOHN, M.D.** *St. Louis, Missouri*
Order dated July 24, 1988. One year suspension, ten years probation.
Violation: Section 334.100.2(4)(i)RSMo.

■ **RICHARD G. MRAD, M.D.** *St. Louis, Missouri*
Order dated April 15, 1988. Thirty day suspension, modified probation.
Violation: Section 334.100.2(4)(o)RSMo.

■ **JOHN K. GRIFFITH, M.D.** *Arnold, Missouri*
Order dated June 10, 1988. Five years probation.
Violation: Section 334.100.2(13)RSMo.

■ **KRISTINE M. PUCHTA-BROWN, D.O.** *Troy, Missouri*
Order dated January 12, 1988. Three years probation.
Violation: Section 334.100.2(4)RSMo.

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Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

October

6-9 Internal Medicine Symposium/ACP Scientific Meeting — Location: Hilton Plaza Inn, Kansas City, MO. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS 66103. 913/588-4488.

7-9 Microsurgery of Lumbar & Cervical Spine — Location: St. Louis University Medical Center, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

10 Magnetic Resonance Imaging of the Liver — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

13-14 Skeletal Integrity in the Elderly — Location: Doubletree at Corporate Woods, Overland Park, KS. Contact: David S. Baldwin, M.P.A., University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS. 913/588-4488.

14-15 31st Annual Physicians Alumni Weekend — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

18-19 "Alpha and Omega: Ethics at the Edges of Life" — Location: Battenfeld Auditorium, University of Kansas Medical Center, Kansas City, KS. Contact: David Baldwin, University of Kansas Medical Center, CME Office, 39th & Rainbow Blvd., Kansas City, KS 66103. 913/588-4488.

21-22 Gateway to New Frontiers in Oncology — Location: Omni International Hotel, Union Station, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

27 7th Annual Cancer Symposium — Location: Heartland Hospital West, St. Joseph, MO. Contact: William Russell, Heartland Cancer Treatment Center, 901 Robidoux, St. Joseph, MO 64501. 816/271-7520.

27-28 7th Annual Conference on Genetic Disorders — Location: Loews Anatole Hotel, Dallas, TX. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Science Center, Columbia, MO 65212. 314/882-4105.

27-29 Society of Teachers of Family Medicine, Regional Conference — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

28-29 Pulmonary Medicine in Primary Care — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

November

3-4 Pediatric Advanced Cardiac & Trauma Life Support — Location: Cardinal Glennon Children's Hospital, St. Louis. Contact: Virginia Eason, Cardinal Glennon Children's Hospital, 1465 S. Grand, St. Louis, MO 63104. 314/577-5657.

3-5 Annual Fall Clinical Conference — Location: Alameda Plaza Hotel, Kansas City, MO. Contact: Linda Smutz, Kansas City Southwest Clinical Society, 222 W. Gregory Blvd., Suite 323, Kansas City, MO 64114. 816/523-3383.

5 Cardiology Update — Location: Marriott Pavilion Hotel, St. Louis. Contact: Anita Herbst, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

11-13 Anesthesia and the Geriatric Patient — Location: Marriott Pavilion Hotel, St. Louis, MO. Contact: Mrs. Peggy Grady, Department of Anesthesiology, Washington University School of Medicine, 660 South Euclid Ave., Box 8054, St. Louis, MO 63110. 314/362-1194.

11-13 Psychiatry Legal Environment: Medicine's Response — Location: Hotel DelCoronado, San Diego, CA. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

14 **Biliary Lithotropsy** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

18-19 **Obstetrics Update 1988** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

27-Dec. 2 **74th Scientific Assembly of the Radiological Society of North America** — Location: McCormick Place Convention Center, Chicago. Contact Merle Hedland, Director of Scientific Meetings, Radiological Society of North America, 1415 22nd Street, Tower B, Oak Brook, IL 60521. 312/571-2670.

December

9-10 **Epilepsy: An Update** — Location: Omni International Hotel, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

12 **MRI in the Clinical Management of Lymphoma** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

1989

January

9 **City-Wide Radiology Conference** — Location: St. Louis University, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

19-21 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Eason, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

29-Feb. 3 **Aggressive Management of Your Retirement Plan and Valuation of Your Practice** — Location: Virgin Grand Beach Hotel, St. John, Virgin Islands. Contact: James H. McCray, DDS, MAGD, seminar coordinator, Professional Education Society, 231-B Flamingo Road, Mill Valley, CA 94941. 1/800-872-3070.

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Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

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References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85

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Manuscripts should be submitted to the editor, Donald G. Sessions, M.D., P.O. Box 1028, 113 Madison, Jefferson City, Mo. 65102. The transmittal letter should designate one author as correspondent and include his address and telephone number.

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

Editorials

Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

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CLASSIFIED ADVERTISING INFORMATION

Rates: $15 per insertion for 50 words or less for members and $25 per insertion for 50 words or less for nonmembers, with an additional 25¢ per word in excess of 50.

Copy Deadline: Copy due by the first of the month prior to month of publication. Send to MISSOURI MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City 65102.

Word Count: Count as one word all single words, two initials of a name, each abbreviation, isolated numbers, groups of numbers, hyphenated words. Count file numbers as five words.

File Numbers — Advertisers using file numbers forbid disclosure of their identity. Written inquiries are forwarded to such advertisers. To assure prompt delivery when replying to an advertisement with a Journal file number, address letters as follows: File (insert number), c/o Missouri State Medical Association, P.O. Box 1028, Jefferson City, Mo. 65102.

All advertisements are subject to approval by the Editorial Board prior to acceptance.

Physicians Wanted

One Psychiatrist — needed to complement a team of dynamic psychiatrists and general physicians. Located 65 miles south of St. Louis on Highway 67, our hospital has 318 beds. We are looking for Board Certified or Eligible specialists. Remuneration will range from $67,000 up, depending on years of experience, Board Certification and optional on-call days. Fringe benefits come to an additional 35% of the salary which includes vacation time, sick time, CME allowance, health insurance and life insurance. For detailed information, please write to: Adolph J. Herath, M.D., Medical Director, Farmington State Hospital, Farmington, MO 63640 or call 314/756-6792, extension 347.

Emergency Medicine in IL and MO — Full and part-time positions available in emergency departments for qualified physicians seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Alyson Donor, staffing specialist. National Emergency Services, Inc., 255 Executive Dr., Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516/349-0100.

Family Practice Opportunity in mid-eastern Illinois. Due to the imminent retirement of family practice physician. You may join this thriving practice without financial risk. Excellent salary, plus incentives with liberal benefits including malpractice insurance. Contact Don Hoit, Farris & Associates, Inc., 16216 Baxter Road, Suite 200, Chesterfield, MO 63017. 314/532-4880.

Southeastern Iowa — Seeking full-time and part-time physicians for new 50-bed hospital emergency department. Attractive hourly compensation and malpractice insurance provided. Benefit package available to full-time physicians. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 44, Traverse City, MI 49684; 1-800-253-1795 or in Michigan 1-800-632-3496.

Eastern Iowa — Progressive young BC FP seeks residency-trained BC FP for growing practice. Call every fourth night. Newly remodeled hospital. Active community 19 miles from Iowa's third largest city. Send CV to S. Hanas, M.D., 1118 11th, DeWitt, IA 52742.

Missouri: Immediate opening for full-time or part-time emergency physician in 120-bed hospital in community of 10,000 in southeast Missouri. 9,000 visits annually. ACLS, ATLS required. Send C.V. to Comprehensive Emergency Care, Inc., P.O. Box 565, Kennett, MO 63857.

Missouri: Medical director position available for emergency physician in 120-bed hospital in community of 10,000 in southeast Missouri. 9,000 visits annually. ACLS, ATLS required. $100,000 plus benefits. Send C.V. to Comprehensive Emergency Care, Inc., P.O. Box 565, Kennett, MO 63857.

Ophthalmology Practice for Sale. Excellent opportunity for M.D. to assume general ophthalmology practice in southeastern Illinois. Gross income $475k; low overhead; modern equipment (including Lasers); facility on grounds of 100+ bed hospital; terms available; will introduce. Call or write: R. L. Hirsh Associates, Ltd., 1855 Union Boulevard, Bay Shore, NY 11706 ATTN: GREGORY NIZICH. 516/665-0439.

Private Practice Opportunities: Family Practice and Internal Medicine, attractive salary, excellent incentive compensation, liberal benefits including malpractice. Prospective for OB/GYN, Pediatrics, Psychiatry. Send C.V. to Don Hoit, Farris & Associates, Inc., 16216 Baxter Road, Suite 200, Chesterfield, MO 63017 (314) 532-4880.

Occupational Medicine Physician — Full-time position with a well-established hospital-based occupational medicine clinic in the Kansas City area. BC/BE in Occupational Medicine desirable, but an interest in occupational health with a strong clinical background will be considered. Excellent compensation package based on guarantee plus incentive and a comprehensive benefits package. To learn more about this opportunity, send detailed resume to: File #11, c/o

Physician Wanted

MISSOURI MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

ANESTHESIOLOGY, DERMATOLOGY, FAMILY MEDICINE, GENERAL SURGERY, INTERNAL MEDICINE, ORTHOPEDICS, OTOLARYNGOLOGY, OB/GYN, PEDIATRICS, PSYCHIATRY. ALRMG is a 37-MD non-HMO clinic in beautiful Albert Lea, MN. These positions are created by retirements and development of new departments. The hospital and clinic are modern, progressive, established and the primary health care providers in our service area. Excellent educational and cultural opportunities. Competitive income, excellent benefits, early shareholder status with first year salary guarantee with incentive options. Send CV to: Administrator, ALRMG, 1602 Fountain St., Albert Lea, MN 56007-1642 or call 507/373-8251 for further information.

Physician Wanted
Immediate Opening. Physician to join busy solo family practice in dynamic central Missouri rural community: salary guarantees; benefits; buy-in opportunity; very good patient age spread; excellent schools, housing, hospital availability. Send C.V., or contact D.R. Molesworth, Adm., Boone Clinic, 401 Keene Street, Columbia, MO 65201. 314/874-3300.

Board Eligible/Board Certified orthopedic surgeon to join thriving, growing practice in urban area of St. Louis, MO. Attractive compensation package and benefits. Possibility of partnership. No financial risk. Contact: Don Hoit, Farris & Associates, Inc., 16216 Baxter Road, Suite 200, Chesterfield, MO 63017. 314/532-4880. (NOT A SEARCH FIRM.)

General Surgeon BC/BE with training or experience in vascular surgery to join our three-man General Surgery group in West Tennessee in 1989. Competitive first year salary with fringe benefits and early partnership for right person. Practice in a community of 50,000 serving a population of 150,000 plus. Send CV to: Jackson Surgical Associates, 686 W. Forest Avenue, Jackson, TN 38301.

Thinking About Selling Your Practice? We have the buyers and can assist in all aspects of a sale including financing and valuation. We would be happy to discuss your specific situation in an initial private meeting at no cost or obligation to you. Call, THE MEDICAL MARKETPLACE, 314/997-0535.

Seeking a surgeon. ABTS certified/eligible to join a busy practice of cardiovascular surgery, preferably with Pediatric, Transplantation, and Surgical Electrophysiology experience. Recently out of residency training. Send CV to: Kansas Heart Institute, 823 Mulvane, Suite 380, Topeka, Kansas 66606 or call 913/233-1690.

General Internist — Springfield, Missouri; 425,000 medical service population, join 5-physician IM group. Fully-equipped modern clinic, 6 local hospitals; critical care interest beneficial. Competitive salary, benefits. Reply to File #16, C/O *Missouri Medicine*, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

Busy Internist seeks associate. BC/BE candidate will share varied caseload reflecting urban St. Louis neighborhood. Admissions to teaching hospitals with faculty appointment available. Good people skills and sense of humor required. Respond with CV to: File #4444, C/O *Missouri Medicine*, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

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1989 CME Cruise/Conferences on Medicolegal Issues & Risk Management — Caribbean, Mexico, Alaska/Canada, China/Orient, Scandinavia/Russia, Mediterranean, Black Sea, Trans Panama Canal. Approved for 24-28 CME Category 1 Credits (AMA/PRA) and AAFP prescribed credits. Excellent group rates on finest ships. Prescheduled in compliance with IRS requirements. Information: International Conferences, 189 Lodge Ave., Huntington Station, NY 11746. (800) 521-0076 or 516/549-0869.

Auxiliary Message

Continued from page 643

This is an excellent opportunity to meet with your legislators. Why not attend PIP in the morning while your spouse is participating in Legislative Day and then join your spouse and legislator for lunch?

Let's begin now before Plato has another opportunity to show just how wise he was! ■

Practice Management

Continued from page 645

Level I, II and/or III, use the code that most specifically describes the procedure or supplies used.

C.L., it is likely that you should have been using codes from either Level II or III HCPCS in order to maximize your reimbursement for supplies and materials. Generally code 99070 pays very minimally for supplies; often under $2. By using the correct HCPCS code for your specific supplies/drugs, you should find reimbursement more closely approximates the supplies/drugs actual costs. You are also likely to find that there are many supplies, drugs and procedures listed in HCPCS Level II and III codes that will, when used, improve your third party reimbursements.

MISSOURI PHYSICIANS' HEALTH PROGRAM DIRECTORY

For information concerning the Physicians' Health Program of MSMA or to get help for an impaired colleague, yourself or your spouse, please contact the MSMA Physicians' Health Program Hotline or the contact person in your area. All information and identities will be held in strictest confidence, and the caller need not identify himself or herself.

Jack L. Croughan, M.D., Director, *St. Louis*	(Office)314/725-4004 (Answering Service)314/768-4990
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MISSOURI MEDICINE

Classified Advertising Form

1. Please print or type all information requested and return this form to Valerie A. Peters, Editorial Assistant, MISSOURI MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102. **Deadlines for publication are the first of the month preceding the month of publication.** The deadline is the same for cancellation of a current ad. For example: An ad to run in the November issue should be received by MISSOURI MEDICINE no later than October 1. An ad running in the October issue that the advertiser wants to cancel for November should also be cancelled no later than October 1. **Classified advertising costs:** $25.00 for non-members for the first 50 words or less, then 25¢ per word after that. The cost is $15.00 for members for the same ad, plus 25¢ per word beyond 50 words. File numbers cost an extra $1.25.

NAME ______________________________

ADDRESS ______________________________

CITY ______________ **STATE** ______________ **ZIP CODE** ________

SIGNATURE ______________________ **TELEPHONE** ____________

2. Check here if you want your ad to run continuously until you cancel. If you want to specify only certain months, skip this and go to number 3. ☐

3. Check here to specify the months your ad should run. Place the last two digits of the year in the blanks. Check to be sure you mail the ad prior to the deadline.

☐ Jan. 19 ____
☐ Feb. 19 ____
☐ Mar. 19 ____
☐ April 19 ____
☐ May 19 ____
☐ June 19 ____
☐ July 19 ____
☐ Aug. 19 ____
☐ Sept. 19 ____
☐ Oct. 19 ____
☐ Nov. 19 ____
☐ Dec. 19 ____

4. Check here if you want ad response sent to you via a File number. This costs an additional $1.25. ☐

5. Check the heading you want your ad placed under.

☐ Art For Sale
☐ Equipment For Sale
☐ Real Estate
☐ Physician Wanted
☐ Locum Tenens
☐ Other ______________________
☐ Practice For Sale
☐ Misc. For Sale
☐ Position Wanted
☐ Services

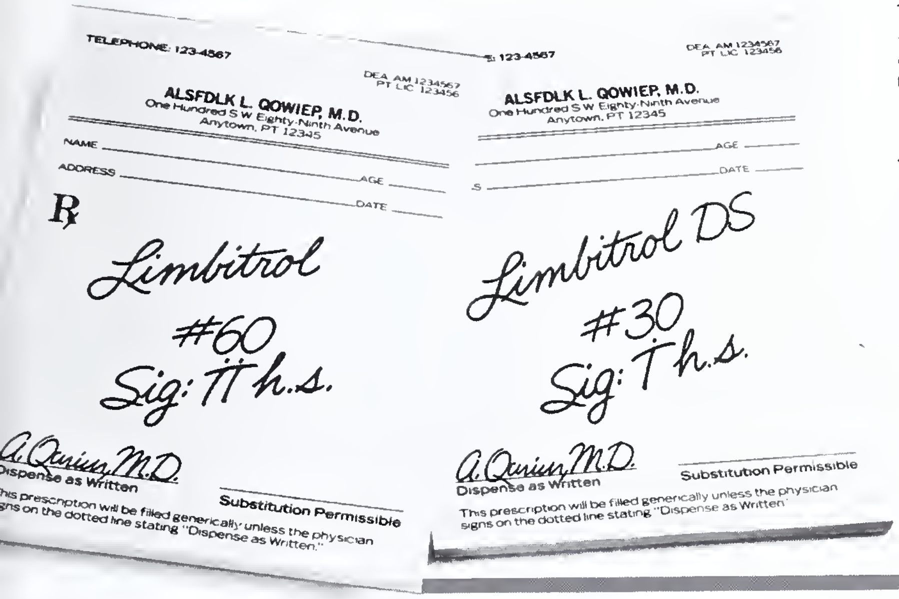
6. Check method of payment:

☐ Check made payable to MSMA. Amount $ ____________ ☐ Please bill me.

7. Use the lines below to print or type the ad *exactly* as it should appear. If necessary, additional paper may be used to complete the ad.

In moderate depression and anxiety

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]



TELEPHONE: 123-4567

DEA AM 1234567
PT LIC 123456

ALSFDLK L. QOWIEP, M.D.
One Hundred S W Eighty-Ninth Avenue
Anytown, PT 12345

NAME
ADDRESS AGE
DATE

℞

Limbitrol
#60
Sig: ī̄ h.s.

A. Quinn M.D.
Dispense as Written
Substitution Permissible

his prescription will be filled generically unless the physician
gns on the dotted line stating "Dispense as Written."

123-4567

DEA AM 1234567
PT LIC 123456

ALSFDLK L. QOWIEP, M.D.
One Hundred S W Eighty-Ninth Avenue
Anytown, PT 12345

AGE
S DATE

Limbitrol DS
#30
Sig: ī h.s.

A. Quinn M.D.
Dispense as Written
Substitution Permissible

This prescription will be filled generically unless the physician
signs on the dotted line stating "Dispense as Written."

Protect Your Prescribing Decision:
Specify "Do not substitute."

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓒ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓒ

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2**. Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

Limbitrol® Ⓒ
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuance and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

ROCHE

ROCHE PRODUCTS INC.
Manati, Puerto Rico 00701

P.I. 0288

In the depressed and anxious patient

See Improvement In The First Week[1]...

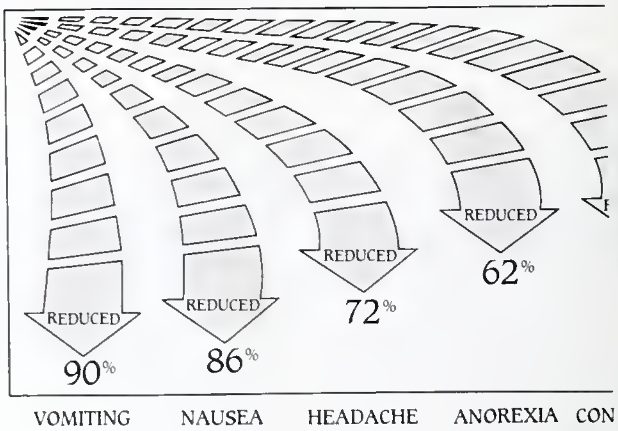
And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms

SERIALS DEPARTMENT
257 MEDICAL SCIENCES BLDG.
SAN FRAN., CA 94143

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Sy
During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

Limbitrol®
Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Limbitrol® DS
Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

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Missouri Medicine

Journal of the Missouri State Medical Association

November 1988

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St. Louis, Missouri.

In this issue:

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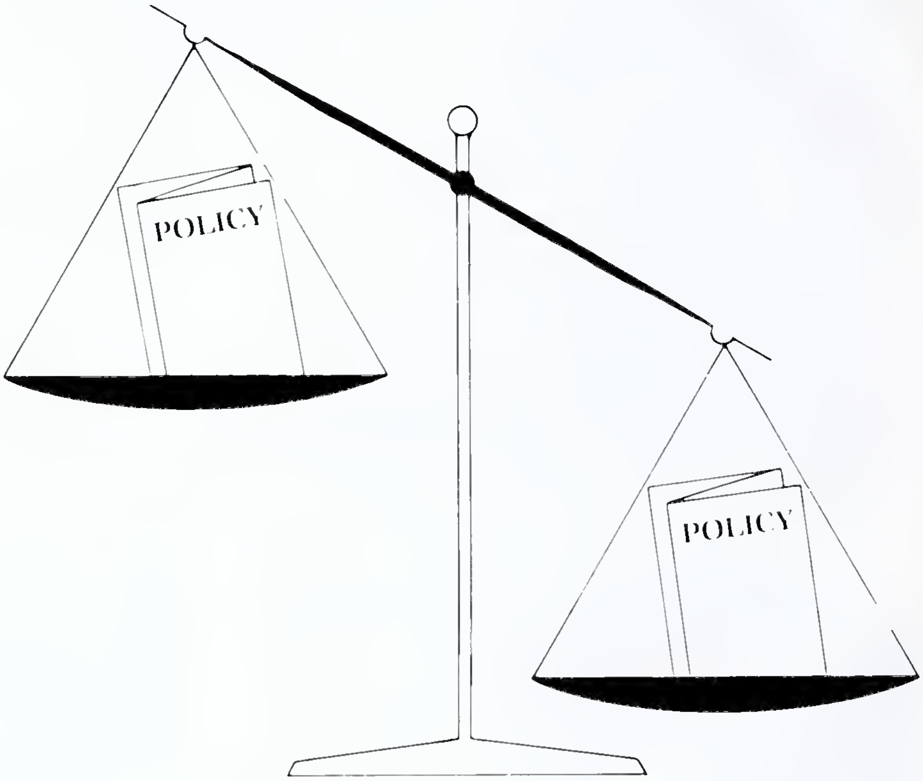
- MSMA Policy Manual



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Jefferson City, MO 65101, 314-634-8090

Kansas City Office, 9229 Ward Parkway, Suite 290
Kansas City, MO 64114, 816-363-6161

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Medicare Part B Blue Cross Blue Shield Kansas City	1-800-654-9629
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Missouri Department of Social Services	314/751-2086
Missouri Patient Care Review Foundation	*(Preadmission)* 1-800-392-8060 *(General Info)* 1-800-392-1312
Missouri State Bureau of Narcotics and Dangerous Drugs	314/751-8042
Missouri State Board of Registration of the Healing Arts	314/751-2334

Cover

Peck, Haydon & Co. clock (1837-1838) restored by clock collector H. Bryan Rogers, M.D. of *St. Louis, MO.* The clock is 38″ x 18″ x 6″ of mahogany and mahogany veneer; it is hand carved with two reverse paintings. Having practiced medicine in St. Louis since 1970, Dr. Rogers began his hobby in 1980 and is a member of the National Association of Watch and Clock Collectors.

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Missouri Medicine

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Editor
Donald G. Sessions, M.D.
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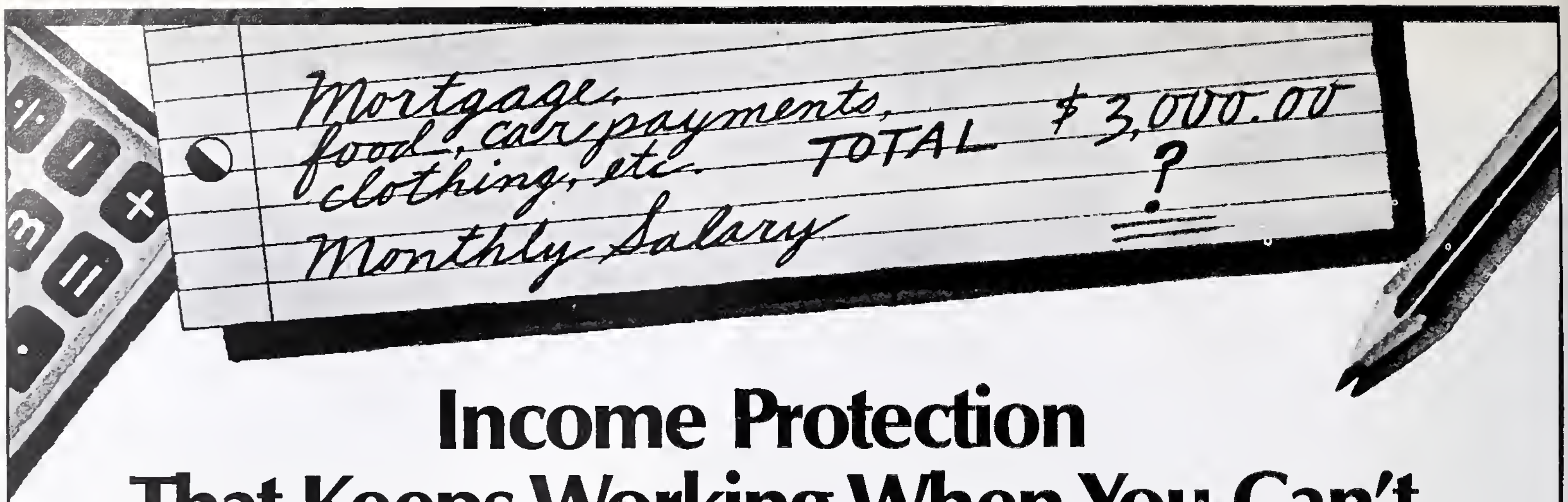

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MSMA Progress Notes

Medicare news

1989 Profile Update

General American Medicare will mail the 1989 profile information in a specially marked envelope this year which will state in red, "Important Profile Information Enclosed." Please alert your office staff about this forthcoming information.

The 1989 participation enrollment period is November 16 through December 31, 1988. Physicians will be mailed their 1989 profile packet the week of November 16. This packet will include a "Dear Doctor" letter along with Medicare reimbursement and charge data. This will assist doctors with their participation decision and should be used by non-participating physicians for their 1989 Medicare charges. The reports will contain:

1. Customary and prevailing charges
2. Special charge limits for overpriced procedures
3. Maximum Allowable Actual Charge (MAAC) calculations

The Medicare Economic Index for 1989 for primary care procedures is 3.0% and 1.0% for all other procedures. Primary care procedures includes all visits with the exception of hospital visits. The non-participating physician prevailing will be 95% of the participating prevailing.

Uniform RVS for Anesthesiology Services

Effective January 1, 1989, all Medicare carriers will incorporate a uniform relative value system (RVS) for anesthesiology services. We anticipate adopting both the RVS developed by the American Society of Anesthesiologists (ASA) and their coding system as well. ASA's coding system collapses the 4400 surgical codes to some 200 groups of codes contained in CPT-4. The Health Care Financing Administration (HCFA) will furnish carriers with a crosswalk of surgical codes to the new coding system. The change to a uniform RVS is likely to be accomplished in a two-step process:

- by January 1, 1989, uniform relative values will be installed for the surgical codes.
- by March 1, 1989, the surgical codes will be collapsed to ASA's system.

Radiology Fee Schedule

There will be two reimbursement methodologies for radiology services. Physicians and suppliers with a low volume of radiology services will be reimbursed using traditional reasonable charge methodology, whereas others with high volume of radiology services will be reimbursed using a fee schedule.

The radiology fee schedule is to be calculated using charge data from physicians and suppliers whose radiology services account for at least 50% of their Medicare billings (submitted charges) for the 12 months ending June 30, 1988. The fee schedule will be used to reimburse physicians and suppliers meeting the 50% rule and, in addition, those certified or eligible to be certified by the American Board of Radiology.

Carriers will not receive necessary information from HCFA for this fee schedule until December 1988. Therefore, physicians subject to this fee schedule may receive a second "Dear Doctor" letter and possibly be offered another enrollment period opportunity. General American Medicare will inform physicians as soon as further details are received from HCFA.

As always, the Professional Relations Department will be glad to answer any questions physicians and/or their staff may have about the 1989 profile update. You may call Professional Relations at (314) 842-1310.

— **Laurel A. Ruzas, RN**
Manager Professional Relations
Medicare Part B
General American
13045 Tesson Ferry Rd.
St. Louis, MO 63128 ■

Division of Insurance exam completed on MOMEDICO

MOMEDICO, the professional liability insurance company sponsored by the MSMA, has recently successfully completed its regularly scheduled insurance department examination. The general purpose of the exam is to enable the director of the Division of Insurance to ensure that the insurance company is in conformity with Missouri law and regulations, and that there is sufficient capital and surplus to meet Missouri legal requirements. Some of the areas included in the exam are: assets, liabilities (including loss and loss adjustment expense reserves), statutory capital and surplus. There were no changes recommended by the Division in any of these key areas.

Anyone interested in receiving more information may request a copy of the exam report from the Division of Insurance at 314/751-4126 or from MOMEDICO at 1/800-392-8039. ■

75% favor national health insurance

Nearly 75% of the respondents to a nationwide survey indicated they support the concept of national health insurance for all, and more than 80% believed hospitals should treat patients based on medical need, not ability to pay, according to United Press International.

Opinion Research Corp., a subsidiary of Arthur D. Little, conducted telephone interviews with 1,032 randomly chosen people, 514 men and 518 women. Some 67% of those interviewed said they viewed hospitals as businesses rather than social service organizations, and nearly 50% believed hospitals should pay taxes. ■

MSMA sponsors workshops

MSMA is sponsoring a series of workshops presented by Conomikes Associates:

- Better Collections/Reception and Patient Flow — December 6, St. Louis; December 7, Columbia; December 8, Springfield.
- Medicare Update — March 21-24, 1989 at four locations to be announced.
- How to Get Started in Medical Practice — March 28-29, 1989, St. Louis.
- Third Party Reimbursement & Coding — May 17-18, 1989 at two locations to be announced.

For additional information, contact the MSMA office at 314/636-5151. ■

MSMA members save 20% on Workers' Compensation Plan

MSMA members who participated in the Workers' Compensation dividend plan managed by the Dodson Insurance Group realized a 20% savings off scheduled premiums for the fiscal year ending July 1, 1988.

Under the plan, physicians receive an immediate 15% discount on their initial premiums. At the end of each fiscal year, participants receive a return on their premiums, based on the cost of claims paid that year. The fewer the claims made, the higher the return.

For the year ending July 1, 1988, participants in the program received a 5% dividend return. This 5% return is coupled with the 15% upfront discount allowed when policies are written. Because the best dividends are earned when injuries are kept to a minimum, Dodson offers accident prevention counseling and expert safety advice to help keep the workplace safe.

For more information on how to join, call or write the Dodson Insurance Group, 9201 State Line, Kansas City, MO 64114 1/800-825-3760. ■

Ann Dandurant Award established

The Missouri Chapter of the National Committee for Prevention of Child Abuse will present the Ann Dandurant Award next May in Columbia. Miss Dandurant was a pioneer in the detection, treatment and prevention of child abuse and neglect in Missouri.

Nominations are being accepted. For information or to obtain an application please contact Peggy Pearl, Award Chair, 901 South National, Springfield, MO 65804-0094 417/836-5880. ■

New Health Department Division

Ross Brownson, Ph.D., formerly chief of the Missouri Department of Health's (DOH) Bureau of Cancer Epidemiology and Control, is the director of the new Division of Chronic Disease Prevention and Health Promotion.

The DOH is one of the first in the nation to reorganize chronic diseases according to the Centers for Disease Control model. Three existing department units will be moved to form the new division. They include the Office of Health Promotion, Bureau of Cancer Epidemiology and Control, and the Bureau of Chronic Diseases.

Brownson received a B.A. degree in cellular biology from the University of Montana in 1979 and received a Ph.D. in environmental health and epidemiology from Colorado State University in 1985. He joined DOH in 1986 as an epidemiologist and in 1987 was named chief of the Bureau of Cancer Epidemiology and Control. He is also a research assistant professor for the University of Missouri-Columbia School of Medicine. ■

Changes in Medicaid billing

The Division of Medical Services (DMS) recently announced that it will begin recouping Medicaid funds from providers for services to recipients who have dual Medicaid and Medicare Part A and Part B coverage. Federal regulations require the billing of Medicare as the **primary payer.** The claims have service dates ranging from October 1, 1986 to June 1, 1988.

DMS will send information to providers to assist in the recoupment process. DMS also has announced plans to start deducting copayment amounts for inpatient and outpatient stays. This policy has been in effect since February 1, 1983, but has not been enforced. The inpatient copayment amount is $10 per hospitalization, and the outpatient copayment is $2 for each date of service. Deductions will be made on claims processed after December 1, 1988. ■

Ketcherside appointed

William J. Ketcherside, M.D. of Liberty has been appointed by Governor Ashcroft to the State Board of Registration for the Healing Arts. Dr. Ketcherside is a neurosurgeon. ■

New AMA publication available

The AMA has developed a new publication to give physicians and their office personnel a thorough understanding of Medicare's "medical necessity" requirements and the carrier review process in general.

Titled "Medical Carrier Review: What Every Physician Should Know About 'Medically Unnecessary' Denials," it is now available for delivery.

The fact-filled, easily-read publication will help physicians and their billing staff cut through the frustrating Medicare maze. Cost is $10 for AMA members and $12.50 for non-members. It may be ordered via Visa or MasterCard by calling tollfree on 1-800-621-8335 (in Illinois call collect to 312-645-4987). Prepaid orders should be directed to the AMA at PO Box 10946, Chicago, IL 60610-0946, listing the publication number, OP-198. ■

Infectious waste rule

Final regulations are expected to be issued this month regarding the disposal of infectious waste by physician's offices and other "small generators."

The Missouri Department of Health and the Department of Natural Resources published proposed rules in the *Missouri Register* in September to implement Senate Bill 535, passed during the 1988 Session of the Missouri General Assembly.

The proposed rules define "infectious waste" and set out guidelines for the disposal of such waste. During the consideration of SB 535, MSMA was successful in obtaining a "small generator" exemption from many regulations for those physicians who generate less than 100 kilograms per month of infectious waste.

However, physicians will be expected to place all sharp objects in rigid containers, render infectious waste innocuous, and certify to trash haulers or sanitary landfill operators that such waste has been properly treated.

As final regulations are developed, MSMA members will be informed on how to comply with the new law. ■

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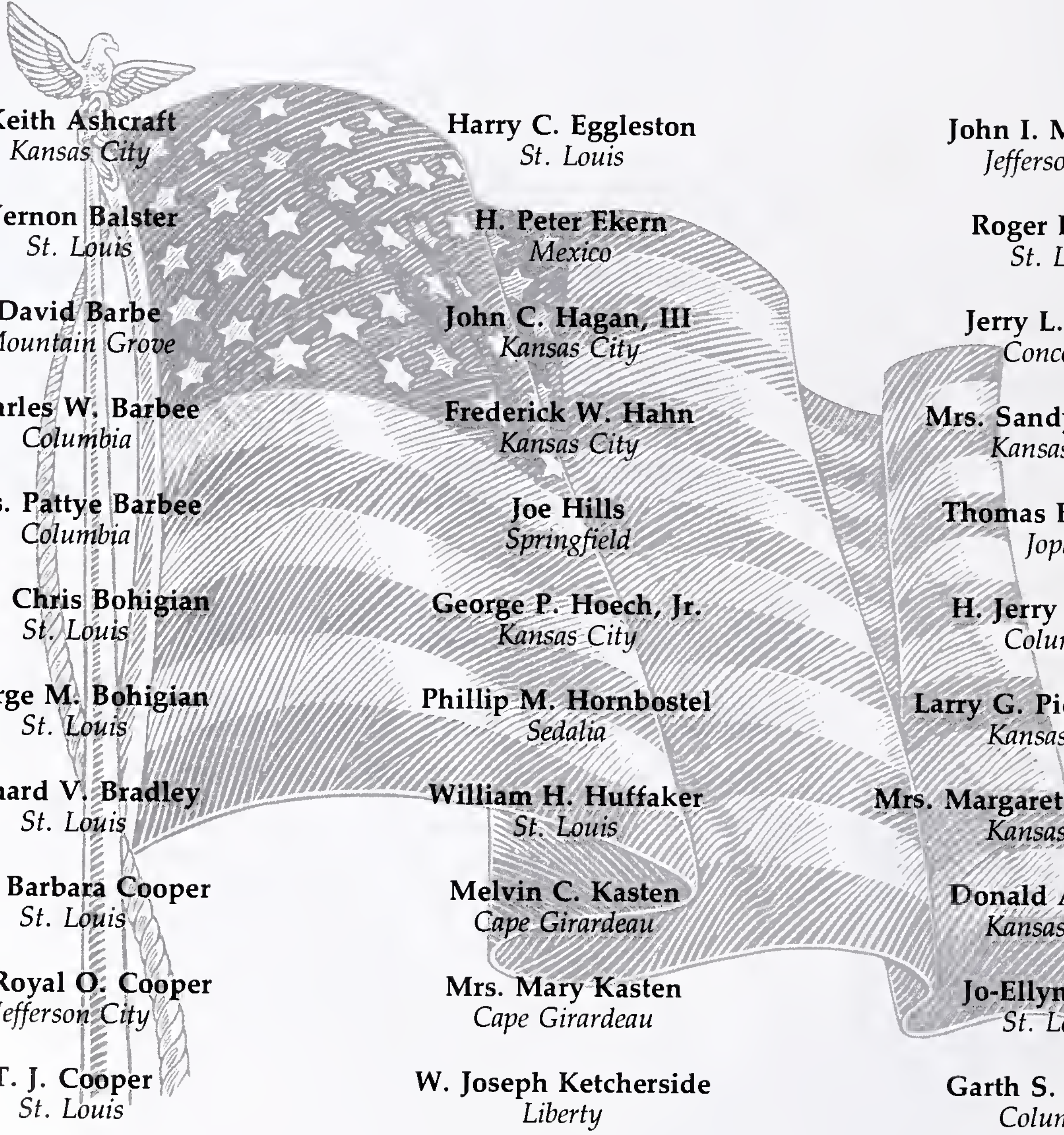
The following individuals are making an impact on state and national legislation. By becoming members of MSMA's "SuperPAC," their contributions and political visibility ensure that medicine's voice is heard in our state legislature and Congress.

Do you want to affect the legislative course medicine is taking? Call 314/636-5151 for details on how to join your colleagues listed here.



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State Requirements for Continuing Medical Education

During the 1987 Legislative Session, the Medical Practice Act was extensively revised. Section 334.075 of that revision outlines the minimum requirements for continuing medical education (CME) and verification of a physician's compliance as a requirement for relicensure.

The Board of Healing Arts further defined the statute through 4 CSR 150-2.110. The rule requires physicians licensed in Missouri to obtain 25 hours of AMA Category 1 credit or AOA 1A during the 12 months immediately preceding the registration renewal date, February 1, 1989, **or** at least 75 hours AMA Category 1 or AOA 1A credit during the three-year period of time beginning February 1, 1988 and ending on January 31, 1991. Physicians may accumulate 75 hours in one year and none in the other two years if they desire.

The MSMA has received numerous calls from physicians seeking to clarify this new requirement. The following are answers to questions that may assist you in the future when obtaining your CME.

1. What is Category 1 Continuing Medical Education?

An activity can be designated AMA Category 1 if it is sponsored or jointly sponsored by an institution or organization accredited for continuing medical education by ACCME or by a state medical society, and if the activity meets the following criteria:

1) It conforms to the AMA definition of continuing medical education.

2) It is based on perceived or demonstrated educational need.

3) It is intended to meet the continuing medical education needs of an individual physician or a specific group of physicians.

4) The educational objectives for the activity are stated.

5) The content is appropriate for the specified objectives.

6) The teaching/learning methodologies and techniques are suitable for the objectives and format of the activity.

7) Evaluation mechanisms are defined to assess the quality of the activity and its relevance to the stated needs and objectives, and

8) There is documentation of physicians' participation by the sponsoring institution/organization.

Individual CME activities are not accredited; only organizations and institutions are accredited. Accredited institutions designate programs AMA/PRA Category 1, if those programs meet the definition of AMA/PRA Category 1 education.

2. What is the AOA Category 1A CME credit?

These are formal education programs sponsored by recognized osteopathic institutions, organizations, and their affiliates which meet the definition of "osteopathic" CME.

Osteopathic principles and practice must be integrated into the entire course of instruction or postgraduate educational programs of all AOA divisional societies, specialty and practice affiliates, hospitals, colleges and the annual AOA scientific seminar; and that at least half of the faculty of said programs be osteopathic physicians or members of osteopathic college faculties, or staff members of osteopathic college faculties, or staff members of AOA-approved teaching hospitals.

The sponsor shall provide that at least 50% of the presenters shall be D.O.s or staff members of osteopathic institutions.

3. Are physicians required to have 25 hours prior to February 1, 1989?

No, if you are unable to acquire 25 hours CME prior to February 1, 1989, you are allowed an additional two years in which to obtain the required 75 hours CME prior to February 1, 1991.

4. Can the AMA Physician's

Recognition Award be used to document compliance with this requirement?

Yes, Missouri physicians may use the Category 1 hours on their most recent AMA Physician's Recognition Award to provide evidence that the CME requirement has been satisfactorily met. However, the Board's requirement exceeds the minimum number of Category 1 credits required to qualify for the PRA.

5. How far back may a physician go to document Category 1 CME?

If the physician elects to submit 25 hours for his first renewal year, he will have from February 1, 1988 to February 1, 1989 to obtain 25 hours of AMA Category 1 or AOA Category 1A.

6. What documentation will be required to accompany the 1989 renewal form?

Physicians need not send certification of their CME hours with the renewal application. At this time, the State Board of Registration for the Healing Arts will accept your affidavit on the renewal form. The Board, at its discretion, will conduct random audits.

7. What constitutes retirement?

The Board has determined that physicians meet *both* of the following conditions:

A. The physician is no longer engaged in active practice, i.e., no longer maintaining office hours and/or seeing patients.

B. The physician is no longer engaged in an organized professional activity for which that physician's education and licensure uniquely qualifies that physician to perform.

8. I am semi-retired and only see a few patients. Do I have to obtain the required 25 hours of CME?

Yes, the Board does not have a mechanism of prorating CME hours. Only those physicians that satisfy the two conditions for retirement are exempt from this requirement.

9. Does a physician need to obtain the required CME hours even though he/she may be employed to review medical records?

Yes, the physician is utilizing his license and medical education that qualifies to be employed in this capability.

10. I have just completed a fellowship post-graduate training program and how can I obtain the required 25 hours CME?

If you have successfully completed a bonafide residency or fellowship during the twelve months immediately preceding your registration renewal date, you are exempt from the CME requirement for that renewal period and shall so indicate on the renewal form.

11. May I carry CME hours over the subsequent years?

Yes, you may carry your hours over to subsequent years as long as you have not reported them on prior renewal forms.

12. Is it permissible to mix AMA Category 1 with AOA Category 1A?

Yes.

13. How can a hospital become accredited as a sponsor for Category 1 continuing medical education activities?

Interested hospitals should contact Ron Ellison, MSMA Director of Scientific Affairs at (314)636-5151.

14. Where may I obtain a list of scheduled Category 1 programs?

Missouri Medicine lists scheduled CME programs monthly. These free listings come from Missouri hospitals, medical schools and other CME approved organizations. *JAMA* also contains CME opportunities across the nation. ■

Missouri State Medical Association
1988-1989
Policy Manual

This manual shall be a guide for MSMA members to the stand taken by the House of Delegates of the Missouri State Medical Association on issues involving Association policy.

The manual will be updated and revised according to House actions. The date in parentheses following each policy statement denotes the year it was adopted by the House.

Acupuncture

The MSMA urges the Missouri State Board of Registration for the Healing Arts to utilize such legal and statutory powers as may be available to declare that the principles apparently involved in the practice of acupuncture and shiatsu, if found to be scientifically valid and medically beneficial, would fall under the definition of the practice of medicine. (1973)

Alcohol Abuse

The MSMA continues to support the work of community-based organizations such as AA, Al-Anon, Narcotics Anonymous, and others, and it reaffirms its support of professional and public education efforts designed to alert people to the dangers of alcohol and drug abuse. In addition, the MSMA continues to support the Physician Rehabilitation Program and similar programs aimed at helping the victims of alcohol and drug abuse to recover successfully. (1987)

Board of Healing Arts

The MSMA opposes any legislation that would dilute the licensing power of the State Board of Registration for the Healing Arts to license those physicians of good ethical and moral character. (1975)

Cancer

Reporting — The MSMA supports efforts to require hospitals to report to the state all malignant neoplasms, with the exclusion of non-melanomatous cutaneous malignancies. These statistical data are necessary to determine relationships between cancer control efforts in the state. (1982)

Chiropractic

The MSMA is unaware of any scientific evidence that proves that spinal manipulation and adjustment are appropriate treatments for such health conditions as hypertension, heart disease, stroke, cancer, diabetes, and infection. Therefore, the MSMA will continue to warn the public of the health hazards of entrusting the treatment of such conditions to practitioners who maintain that all disease is caused by the misalignment of the spinal vertebrae and can be cured by manual manipulation and adjustment of the spine.

A physician may refer a patient for diagnostic or therapeutic services to another physician, licensed limited practitioner, or any other licensed provider of health care services whenever the physician feels that these services will benefit the patient. As is the case with physician referrals, limited practitioner referrals should be based on the practitioner's individual competence and ability to perform service to the patient. (1981)

Cost Effectiveness

The MSMA encourages individual physicians to help moderate increases in medical care costs by avoiding overutilization and by using appropriate restraints to keep fee increases more in line with annual cost-of-living expenses. The Association endorses the Voluntary Effort to restrain increases in hospital costs. (1978)

Definition of Death

A person shall be considered dead if, in the announced opinion of a licensed physician, based on ordinary standards of medical practice, he has experienced an irreversible cessation of spontaneous respiratory and circulatory functions. In the event that artificial means of support preclude a determination that these functions have ceased, a person shall be considered dead if, in the announced opinion of a licensed physician, based on ordinary standards of medical practice, he has experienced a total and irreversible cessation of spontaneous brain functions, including the brain stem. Death shall have occurred at the time when the relevant functions ceased. (1987)

Dioxin

The MSMA supports an active campaign to bring accurate information on dioxin before the public to prevent irrational reaction and possible unjustified public fright and to prevent dissemination of possible erroneous information until such time as epidemiological studies have been completed. (1983)

The MSMA supports continuing monitoring of dioxin research, recognizing that to date no serious human disease has been conclusively linked to exposure to the chemical. The findings of the AMA Council on Scientific Affairs Panel on Toxic Substances are supported by the MSMA. (1985)

Drinking Age

The MSMA supports legislation at the state and national levels to raise the legal drinking age to 21 years of age. (1985)

Drug Abuse

The MSMA supports educational programs for junior high school students that will emphasize the hazards of drug abuse. (1982)

Drugs

Generic Prescribing — The MSMA opposes governmental interference into the practice of medicine through mandated generic prescribing of drugs. (1976)

Drugs

Physician Dispensing — The MSMA supports the physician's right to dispense drugs and devices when it is in the best interest of the patient and consistent with the AMA's published ethical guidelines. (1988)

Drunk Drivers

The MSMA agrees to cooperate with the Legislature or proper agencies to remedy the dangerous problem of drunk drivers. (1974)

Education

Loans for Medical Students — The MSMA supports continued federal and state subsidized, low-interest loan programs for medical students, with properly enforced repayment. (1982)

Education

School Health — Factual, academically founded courses should be developed and implemented by the Missouri Department of Education to teach human physiology and pathophysiology at the elementary and secondary levels of the school system. (1974)

County medical societies are urged to work with local school districts to assist in providing comprehensive health education programs, and the state colleges of Missouri are urged to prepare qualified health instructors trained to integrate health concepts into all the courses they teach. (1972).

Electroconvulsive Therapy

The Association supports the deletion of requirements that legal guardians obtain court orders authorizing electroconvulsive therapy for patients who have been declared incompetent. (1983)

Emergency Care

The MSMA supports the American College of Emergency Physicians and the American College of Surgeons standards for direct medical control of pre-hospital (emergency) care by qualified physicians. (1986)

Ethics

Education in Medical School — The MSMA supports the teaching of medical ethics to medical students and residents, including information on the workings of the professional disciplinary agencies. (1987)

Fee Splitting

The MSMA reaffirms its support of the AMA Judicial Council's position that the acceptance of financial consideration in exchange for patient referrals, or fee splitting, is unethical and improper. (1985)

Fireworks

The MSMA supports a ban on the sale of fireworks in Missouri. (1976)

Fluoridation

The MSMA, realizing the medical importance of naturally occurring fluoride taken in proper concentration into the human body, recommends the addition of fluoride to all drinking water systems in Missouri in the concentration of one part per million. (1972)

Foreign Medical Graduates

The MSMA Council and committees are encouraged to consult with Foreign Medical Graduate groups when subjects of interest come up. All physicians, foreign medical graduates included, are encouraged to participate in their component medical societies, the MSMA, and the AMA. (1982)

Handicapped

The MSMA is involved in seeking positive ways to encourage training and rehabilitation for disabled persons. The MSMA wants to work with existing organizations to remove physical and emotional barriers that prevent people from working. (1982)

Hospital Medical Staffs — Autonomy

Since the hospital medical staff is a largely autonomous entity within the hospital, the MSMA supports the securing of separate legal counsel by medical staff members when considering matters of rules, regulations and bylaws. (1985)

Hospital Medical Staffs — Membership

The hospital medical staff cannot be forced to accept for full voting membership any member of the allied health professions. This is in keeping with the MSMA's support of existing JCAHO and AMA guidelines that state no hospital governing board can unilaterally amend the bylaws of a self-governing medical staff, nor can it unreasonably withhold approval of the bylaws. (1987)

Human Rights

The MSMA continues to support the dignity of the individual, the importance of human rights and the sanctity of human life, and continues to oppose any discrimination based on an individual's ethnic origin, religious or political beliefs, or any such reprehensible policies. (1986)

Immunization

The MSMA supports legislation that would establish strong immunization requirements for preschool children. (1982)

The MSMA supports American Academy of Pediatrics guidelines for immunization of children. (1987)

Indigent Care

The MSMA urges all physicians to share in the care of indigent patients. (1988)

Insurance — Coverage for Catastrophic Illness

The MSMA supports the plan for providing catastrophic health insurance as outlined in the AMA Report MM, Annual Meeting 1986. (1987)

Insurance — Charge for Extra Claim Forms

Physicians should feel free to charge for the additional service of filing more than one insurance claim form for an individual patient, especially if different claim forms are required rather than a photocopy of the original form. (1973)

Insurance — Chemotherapeutic Costs

The MSMA should sponsor appropriate legislation that would make mandatory the offering of insurance coverage for reimbursement of chemotherapeutic costs, particularly when the therapy is administered on an outpatient basis. (1977)

Insurance — Insurance Company Communications

The MSMA urges health insurance companies to cease to communicate abusive and inappropriate language to patients regarding their physicians' fee structures and services. (1985)

Insurance — Maternity Coverage

The MSMA supports inclusion in all insurance policies for those in childbearing years of a clause providing complete maternity coverage.

In order to provide continuity of coverage, the following eligibility period should be written into all insurance policies concerning benefits for obstetric care: "A pregnancy which begins while the insurance is in force should be covered until the termination of the puerperium and until the newborn infant is discharged from the hospital to home care." (1974)

Insurance — New Waiting Periods

The MSMA believes employees should not have to undergo a new waiting period for coverage of preexisting illness whenever their employer changes insurance companies, particularly when the change is being made in the interest of controlling health care coverage costs. (1985)

Insurance — Psychiatric Illnesses

The MSMA recommends that the state require all health and accident insurance policies sold in Missouri to provide coverage for psychiatric illnesses equivalent to benefits for other medical and physical illnesses. (1978) Reaffirmed (1985)

Insurance — Right to Know

The MSMA encourages all third party payors to provide an easily understood explanation of their benefits and coverage to their policyholders. (1986)

Insurance — Terminology

The MSMA encourages local insurance carriers to be careful about using literature containing the wording "usual, customary and reasonable" when describing insurance benefits paid. This leads some patients to believe physicians' charges are "unreasonable." The MSMA also encourages physicians to include in their patient information materials an explanation as to why the amount billed may sometimes be more than the insurance benefit paid. (1982)

Laboratory — Collecting Fee

The MSMA supports payment under Medicaid to the physician for his service in collecting a specimen for tests performed in an outside laboratory. (1977)

Licensing — Federal

The MSMA opposes any moves to require federal licensure of health manpower. (1976)

Malpractice — Countersuits

Any Missouri physician found not to be negligent in a malpractice suit shall have the assistance of the MSMA in determining if there exists a reasonable basis for the physician to commence an action for malicious prosecution arising out of such case. (1976)

Mandated Second Opinion

The MSMA suggests that the physician who renders a mandated second opinion for a proposed surgical procedure not accept that person as a patient for the proposed surgical procedure. (1987)

Mandatory Assignment

The MSMA is opposed to mandatory assignment under Medicare. (1984)

The MSMA is opposed to the withholding of medical licensure based on the physician's non-acceptance of Medicare assignment. (1987)

Medical Examiner System

The establishment of a county medical examiner system as a replacement for the county coroner system is strongly recommended. (1971)

Medicare-Mandated Restrictions

The MSMA opposes Medicare-mandated restrictions on laboratory tests, referrals, medical examinations or any financial arrangements that might be agreed upon between physician and patient. (1988)

Mentally Incompetent Patients — Hospitalization

The MSMA urges extension of the time limit from 7 to 21 days before the family of a mentally incompetent patient must petition the court for continuation of a hospitalization. (1985)

Motorcycle Head Gear

The MSMA urges all motorcyclists to wear protective head gear (helmets) to prevent death and disability. (1977)

MSMF Loans

The Missouri State Medical Foundation requires membership in the state medical association for those medical students eligible for membership and receiving assistance from the Foundation. (1980)

Nursing Education

The MSMA supports all present forms of nursing education as being essential to meeting the health care needs of the state and local community. (1980)

Nurse Practitioners

The MSMA supports the doctrine that physicians should retain control of medical care and will challenge any person who is practicing medicine without a license, in the courts of law if necessary. (1978)

Peer Review Organization Data

The MSMA asks that data from the Missouri Patient Care Review Foundation concerning decision-making criteria for Medicare admission be made available to Missouri physicians as a way to ensure that denials are not having a negative impact on the quality of medical care for these patients. (1985)

The MSMA supports the current AMA program of data collection on the costs of PRO implementation and the inequities in the PRO system. (1987)

Physician as Patient Advocate

The MSMA affirms its support of the physician in the role of patient advocate in the consumption of health care services, particularly when this role conflicts with the economic goals of the physician's employing third party. (1987)

Physician Assistants

The MSMA opposes state licensure or certification of additional health care personnel because there is no reason to accept a second class or second level of medicine. (1979)

Physician — Right to Choose

The MSMA supports the right of every physician to choose whom he or she will accept as patients and also to exercise his or her choice by the terms of contractual agreements with other physicians, medical groups, hospitals or other institutions. (1981)

Physician — Right to Hospital Privileges

The MSMA is opposed to the granting of hospital privileges to a physician based on that physician's profitability to the hospital. (1988)

Political Process

The Association encourages physicians to become Key Contacts, thereby increasing medicine's role in influencing actions taken by the Missouri General Assembly on issues of importance to our patients and our profession. (1983)

Primary Medical Care

Primary medical care shall be defined as only that care given by a licensed graduate of a medical or osteopathic school. (1977)

Registered Dietitians

The MSMA supports the concept that any person using the title "dietitian" should be a Registered Dietitian. (1987)

Smoking

The MSMA supports legislation directed at designating non-smoking areas in public places, and prohibits smoking at all MSMA House of Delegates meetings and scientific sessions held in conjunction with these meetings. (1981)

The MSMA actively supports legislation prohibiting cigarette smoking in public indoor areas. (1983)

School Bus Safety

The MSMA endorses special pre-licensing examination and investigation of prospective school bus drivers in Missouri, according to criteria established by law. (1986)

Third Party Reimbursement — Physicians

The MSMA supports equal reimbursement for equal professional services provided by a physician, regardless of his geographic location. (1982) Reaffirmed (1987)

Third Party Reimbursement — Hospital DRGs

The MSMA believes it is unfair for Medicare to grant a lower payment to rural hospitals, as compared to urban hospitals, for patient care under the same DRG. (1988)

Unpaid Accounts — Interest

It is not in the best interest of the public or the profession to charge interest on an unpaid bill or note for professional services not paid within a prescribed period of time, nor is it proper to charge a patient a flat collection fee if it becomes necessary to refer the account to an agency for collection.

It is not improper, however, for a physician to add a service charge, equal to the actual cost of rebilling, on accounts not paid within a reasonable time. Patients must be notified in advance about the existence of this practice. (1975)

Utilization Review — Reimbursement

In those hospitals that conduct utilization review of any inpatient care, compensation of physicians for such review is a legitimate expense. The cost of such review should be included in hospital rates and reimbursable costs regardless of the source of payment. (1976)

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No Pain, No Gain

Dear Doctor:
When my g.u. tract was last surveyed,
You sent your bill — it's still unpaid.
Dame Fortune has now smiled on me;
I have Medicare, parts A and B
And when my prostate gland enlarges,
I will gladly pay your charges.

That said, I now seek your advice.
You massaged that gland not once but twice,
And from Medicare I have this letter
Which says: "We're glad you're feeling better
And we dislike sounding arbitrary
But . . . one visit was unnecessary.

"Our computer says that isn't funny
So the doctor must return your money.
We know he labored hard to earn it;
Nonetheless, he must return it.
Though he's your friend, we must insist
Or he'll be stricken from our list

"The law is clear, the law demands it —
Though none of us here understands it."

Dear Doctor, though to health you nurse me,
I fear that you must reimburse me.
A total refund I must get
. . . Although I haven't paid you yet!

* * * *

Dear Patient:
If your prostate must be kneaded,
Though you've had two, I'll still repeat it.
The hand of friendship I'll extend
With a rubber glove perched on the end.
You may be broke, without a tuppence,
But I will outgive you your come-uppence.

Your ailment may just be prostatic —
Yet I'm bound by our oath Hippocratic
To heal the sick in our tradition,
Without, or with, part B's permission.
I'll shrink your gland and send no bill
You'll pay me if, and when, you will.

Without a fee that's prearranged,
No funds will have been exchanged.
The rebate checks which you've awaited
Will, therefore, not be generated.
But we will have the satisfaction
Of a patient-doctor interaction.

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—Benjamin Milder, M.D.
St. Louis, Missouri

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Young Physician Membership

by Jo-Ellyn M. Ryall, M.D.

During the Annual AMA meeting in Chicago, the Young Physicians Section (YPS) met and distributed awards for the top number of new members recruited by a state society. Missouri took first place. We are proud to announce that there were more than 300 new federation members.

Nancy Bunge, M.D., of Mexico, MO, the delegate to the YPS and I thank you new members for realizing how important organized medicine is to the future of medical practice as we know it. We decided not to rest on our laurels but to press on. There are still more than 1100 Missouri physicians under the age of 40 who are not members. We would like to see another surge of membership from the Show Me State.

What does organized medicine have to offer? Membership in medical societies is no longer simply a privilege; it has become a necessity. Medical practice is changing, and it is vital that all physicians nationwide band together to find the best solutions to the issues facing all of us today — professional liability reform, mandatory assignment and physician DRG's.

Many of those who clamor for health care cost-containment, reform and accountability have very little or absolutely no experience caring for patients. Whether they are in government, media, business or other public forums, they have never had the awesome responsibility of replying to a patient's cry for help . . . they have never stood before a sick man, woman or child relying on a physician to cure them.

This is something we do every day. And this is why only we can provide the leadership necessary for American medical care. Only our profession can properly address the personal and human aspects of health care.

In years to come, medicine's success will not depend on economics, but on the degree to which we care for our patients' needs. Success will also depend on your willingness to support organized medicine's efforts. **Membership support is what makes it possible for the Association to continue to offer the types of actions and services you need.**

What types of action and services? The AMA has the resources to lobby for the interests of our patients and profession in Washington and the Missouri State Medical Association is on the scene in Jefferson City to protect our needs and to advise the legislators on medical issues. The AMA has a

Continued on page 722

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EDITOR'S DESK

By Donald G. Sessions, M.D.

Interestingly, even now, years later, he can remember exactly the profound impact produced in him by his personal conversation about cancer. This conversation is triggered almost daily as he sees his patients.

The power of words

Doctors and patients live in language. That is, everything we do occurs in a conversation. These conversations live in our bodies and most of this activity is automatic. For instance when I am driving and see a police car, a conversation is triggered about speeding, and courts and fines, and I automatically check my speedometer. Simultaneously I have a little tightness in my chest and some anxiety. This conversation cannot be separated from me. You might say that it is a conversation that has me rather than a conversation that I have.

When our patients come in to see us they bring a multitude of these automatic conversations with them. When we, as doctors, say or do something, these conversations are triggered in our patients.

Several years ago, a friend who is a radiation therapist, noticed a small lump on the back of his tongue. Since a major portion of his practice includes treating patients with head and neck cancer, and specifically tongue cancer, he went immediately to his surgeon who found a slightly inflamed one-half centimeter mass at the lateral aspect of the base of the tongue. The mass was unchanged after two weeks of antibiotics and the surgeon performed a biopsy under general anesthesia as an out patient.

The biopsy was done on a Friday and after a weekend of worry he came in on Monday and called the pathologist regarding the biopsy result. The pathologist asked him, "Have you talked with your surgeon?" and my friend said that he hadn't. "Well," said the pathologist, "I would prefer that you would talk to him."

"But it's me. You know I'm a radiation therapist," said my friend, "you can tell me the result." "Well," said the pathologist, "it's invasive poorly differentiated epidermoid carcinoma. Why don't you come up and we can look at the slides together." My friend, who had taken two years of pathology as part of his training rushed up to check the slides.

"As I looked at the slides," he told me later, "I saw that it was a wildly undifferentiated carcinoma, and I remembered all the patients I had treated for cancer of the base of the tongue and the way that many of them had died. My body was fixed in fear."

He had gotten up in a fog, he told me, and had gone to the office of his associate and told him the news. His associate had examined him, noted the size of the biopsy site, and after some dicussion they agreed that it should be treated with radiation therapy reserving surgery for "salvage." To save time they did some simulation films but since it was the day before Christmas they decided to postpone the start of therapy for a few days.

He went to his car and drove home. During the drive home, he went over the situation and, he said, "three major thoughts came to me: One, that I had never intentionally injured anyone; two, that I was overwhelmed with love for my family and was concerned about what would happen to my

Continued on page 722

THE LOWER RESPIRATORY TRACT–

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Summary.
Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).
Contraindication: Known allergy to cephalosporins.
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061088L]

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Auxiliary Message

by Marge Perkins, Health Projects Vice President MSMAA

Missouri's auxiliaries are targeting substance abuse, sexuality and pregnancy, eating disorders and other adolescent health problems.

Auxiliary health projects to focus on adolescents

The Missouri State Medical Association Auxiliary will continue to work with the AMA Auxiliary on its Adolescent Health Initiative which is a comprehensive plan to help teens grow into healthy adults. Since the initiative was launched a year ago, Auxiliaries throughout the state have implemented many successful projects and programs in the areas of concern targeted by the AMA including substance abuse, sexuality and pregnancy, eating disorders, suicide and physical/sexual abuse.

The two main projects we are concentrating on this year however, are AIDS Education for Teens and A Smoke Free Society by the Year 2000. In his keynote address at the 1988 Annual Session of the AMA Auxiliary House of Delegates in June, C. Everett Koop, M.D., U.S. Surgeon General said "You don't catch AIDS or an addiction to tobacco. You have to do something to get it. Hence the very best weapon we have to fight both problems is education, education and more education."

As a volunteer arm of the medical profession, we Auxilians are in a unique position to help provide our communities with such important information as current facts about the seriousness of AIDS; how the virus is spread and **not** spread and where to get more information about AIDS. We can also develop clean air programs in health care facilities and convince students to develop healthy tobacco-free lifestyles.

Each county auxiliary will plan programs featuring speakers, audio-visual aids and printed materials on one or both of these problems. As a statewide project we have already distributed 3000 of the booklets *AIDS: A Guide for Survival,* purchased by the MSMA, to 250 senior high schools for use in their health classes or in the library. Other county projects will be Teen Suicide Prevention Networks, AIDS Seminars, and raising money to buy "Organella" or "Choking Charlie" which will be used in classrooms. Auxiliaries will also be holding Health Fairs, helping with screening tests and planning blood drives.

Health Projects are one of the most important areas of the auxiliary. Through these projects we will improve the health of the people of our state and enhance the image of the medical profession. ■

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PRACTICE MANAGEMENT

by Janice K. Woerth, Ph.D.

Do you have a question for Dr. Woerth? Include your questions along with your name, address and phone number and send them to:

Janice K. Woerth, Ph.D.
Practice Management
c/o Missouri Medicine
P.O. Box 1028
Jefferson City, MO 65102

Although your name will ***not*** *be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.*

Immediate Payments

Dear Dr. Woerth,

I would like to have more of my patients pay for services at the time they are rendered. How can I initiate this change in my long-established practice?

Dr. L.W.

Dear. L.W.,

Having patients pay for medical services when they are rendered is an excellent means of reducing collection costs and of potentially increasing your collection rate.

Start by letting your patients (new or established) know when they make an appointment that payment will be expected at the conclusion of the appointment. I have even been in offices where new patients are told the cost of their initial office visit over the telephone. They are also told that they can pay for their medical services by cash or check and in some offices by credit card. This information can also be communicated via a brochure sent to all new patients or on the patient appointment cards.

Upon the conclusion of a patient's appointment, he/she needs to be informed by the staff as to the cost of the services rendered and be given the opportunity to pay. If the patient asks to be billed for the day's services, immediately give the patient a bill for the cost of the services and any outstanding balance on his/her account. Include a return envelope with the bill; you may want to add postage to the envelope. If you do add postage let the patient know and use it as an opportunity to encourage prompt payment. For example, "Mr. Jones, I've placed a stamp on this return envelope so that you can send your payment for today's services as soon as you get home. We really appreciate your prompt payment."

Don't expect that your patients will all conform to a new payment policy but you will probably be surprised how many patients easily adapt. ■

Avoiding Medicare Overbilling

Dear Dr. Woerth,

Recently a colleague of mine was audited by Medicare and, consequently, had to refund money to Medicare because of overcharges billed and collected for office visits. He also was required to pay interest on the money refunded. How can I avoid this happening in my practice?

Dr. A.M.

Dear Dr. A.M.,

To prevent overbilling of office visits and thus having to refund money to an insurance carrier, your staff who are responsible for coding and billing need to be familiar with the definitions of office visits listed on pages xiv-xvii of the 1988 CPT-4 book. These definitions must be applied when billing patients. In other words, the services rendered by the physician and billed as a intermediate office visit should be reflective of the services listed as an intermediate office visit in CPT-4.

Frequently I find that the definitions for levels of office visits (as well as consultations and emergency care services) used by medical office personnel differ markedly from the definitions found in CPT-4. As a consequence, these are incorrectly billed and often affect the amount of reimbursement. Should the insurance carrier audit these incorrectly-billed claims and find overpayments have been made, a refund of the overpaid amount would be requested.

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Editor's Desk

Continued from page 717

young children; and three, I thought about my patients, and how this type of situation must be terribly difficult for them."

He went home and explained to his wife the situation as he saw it — that he was going to undergo radiation treatments and surgery and would probably die from the cancer. His wife, he said, had shown an inner strength and courage that had inspired him. "We will fight this," she had said.

Later he was to recall that the time period after he had received his diagnosis was unreal for him. Although he could remember clearly what had happened in detail, the events themselves seemed to occur in slow motion. His body was heavy and he was overwhelmed with fear and hopelessness. He could only remember the difficult time that his own patients had undergone with this disease.

He and his wife had begun to look at available options for handling the situation. These, of course, were limited by his view of his poor prognosis. Then he and his wife received a very interesting phone call. His associate, the radiation therapist, had gone to lunch and had run into the surgeon who had done the biopsy. When the surgeon heard the news that the diagnosis was cancer he was incredulous. "That wasn't that suspicious," he said, getting up from the middle of his meal. They went up to pathology immediately to check the result. The surgeon had performed two biopsies that Friday and the positive biopsy was from another patient with far advanced cancer. Re-check of my friend's biopsy showed acute and chronic inflammation.

This information produced an entirely diffferent conversation for my friend and his wife. She broke down completely in tears of relief and joy. Later my friend described feeling as if a huge burden had been lifted off his shoulders. An impromptu and prolonged celebration followed. Interestingly, even now, years later, he can remember exactly the profound impact produced in him by his personal conversation about cancer. This conversation is triggered almost daily as he sees his patients.

It is clear that what we doctors say to patients can have a profound impact. What the patient hears is modulated by his previous experience. The spoken word has an immediate effect on a patient's body. It is interesting to speculate on the possibility of how this phenomenon could be utilized to facilitate the health and well being of our patients. ■

Practice Management

Continued from page 721

Failure to promptly refund the overpayment can result in the addition of interest levied against the amount owed to the insurance carrier. Underpayments to the physician as the result of incorrect billing are generally the physician's loss. The insurance carriers feel that it is the responsibility of the office staff to know how to correctly bill to maximize reimbursement.

An audit can be flagged by the insurance carrier when a practice repeatedly bills for only one or two levels of office visits. Insurance carriers, and especially Medicare, expect that physicians will charge for a variety of levels of office visits over the course of time. It is further expected that the differences between levels of office visits will be based on the services rendered and recorded and not on the amount of time spent. In the event of an audit by an insurance carrier, your medical record is the documentation of services rendered and should substantiate the level of office visit billed.

If you are in doubt as to your staffs' knowledge regarding CPT-4 definitions and their skills at coding, I suggest that you consider investing in a one or two day insurance reimbursement training course for them. The knowledge that they gain should reduce the likelihood of overbilling as well as underbilling. ■

Membership

Continued from page 714

dedicated legal staff which has provided briefs for federal cases that may shape the practice of medicine in the future. The AMA has the resources to research topics in the field of medical education, medical service and to prepare reports and position papers on these, shaping the future course of medical practice. We don't have time individually to influence the forces that oppose medicine as a profession. We can't take time from the care of patients to do it all ourselves.

The AMA, Missouri State Medical Association and local medical societies deserve your support. The way you can show support is to become a member. For membership information contact your local medical society or the MSMA headquarters in Jefferson City at 314/636-5151.

If you have questions ask a colleague who belongs to AMA and MSMA or contact Jo-Ellyn M. Ryall, MD (314/993-8649; office: 9216 Clayton Rd #105 St. Louis, MO 63124) or Nancy Bunge, MD (314/581-5011; office: Old Farm Professional Center, Mexico, MO 65265) for more information. Nancy and I have seen how the young physician section of the AMA has influenced the House of Delegates. Our voices are being heard and are being answered. ■

Herpes Gladiatorum in a High School Wrestler

Marcia Keilhofner, M.D., and David S. McKinsey, M.D.
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The intimate contact and minor skin abrasions associated with the sport of wrestling place these athletes at particular risk for acquiring certain infectious diseases. The case of a young wrestler who acquired a herpes simplex virus infection, only to pass it on to several teammates, is presented. Control measures are discussed.

More than 7,000 Missouri teenagers participate in high school wrestling competition each year. Because wrestling is associated with prolonged intimate contact and repetitive minor trauma, wrestlers are at risk for a variety of infectious diseases. Early recognition and appropriate treatment of infectious diseases in wrestlers is important to prevent epidemic spread of infections within wrestling teams. We recently cared for a Missouri high school wrestler who developed primary cutaneous Type I herpes simplex virus (HSV) infection during an epidemic which ultimately involved approximately one-third of his teammates.

Case Report

A 16-year-old male high school wrestler was hospitalized for evaluation of a skin rash. He related a history of a superficial "mat burn" to the skin behind the right ear. The area initially healed, but five days later he developed a vesicular eruption in the previously traumatized area. Local erythema and pain, low-grade fevers, malaise, and tender cervical adenopathy were noted. Treatment with oral amoxicillin and clavulanic acid and topical antimicrobial ointment was initiated after culture of a pustule grew *Staphylococcus aureus*. Pain and purulent discharge did not abate with this therapy, and skin lesions began to spread to the right shoulder, face and neck. Previous medical history was remarkable only for bilateral myringotomies at age three and childhood asthma. No personal or family history of skin lesions was elicited.

On admission examination, the patient's temperature was 37.8°C. The right external auditory canal was mildly erythematous with a normal-appearing tympanic membrane. The area behind the right tragus was fissured, with surrounding erythema and a purulent discharge. Small grouped vesicular and vesiculopustular lesions were present on the right side of the neck and shoulder, the right helix and both cheeks (Fig 1).

Viral culture from a vesicular facial lesion was positive for herpes simplex virus Type I. Intravenous nafcillin and oral acyclovir therapy were started. The skin lesions resolved rapidly.

On further questioning, the patient mentioned that there had been a recent outbreak of facial skin lesions in several members of his high school wrestling team. An interview with the head coach of the 58-member team disclosed the occurrence of grouped vesicular skin lesions in at least 17 team members. The first case occurred in a wrestler who reported no prior history of herpes virus infections and no known previous contact with wrestlers who had skin lesions. The following week, several more team members, including the patient reported above, developed vesicular lesions, most occurring on the right side of the

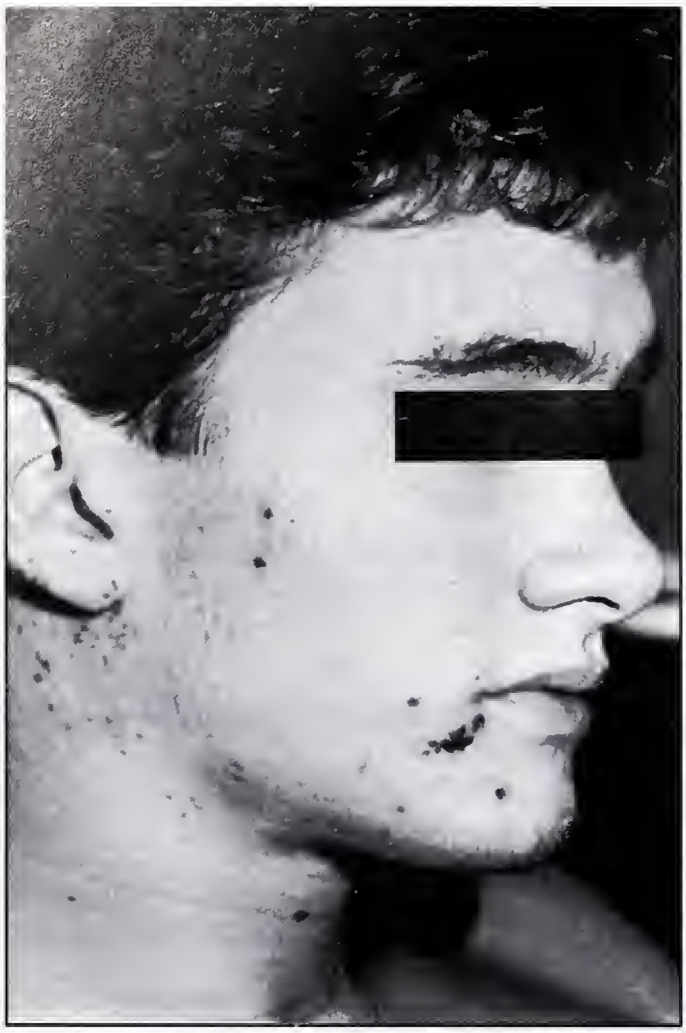

Fig. 1. Multiple grouped vesicular and vesiculopustular lesions on neck, ear, and face. (Photograph taken several days following initiation of therapy; some lesions have started to heal.)

face and neck. One wrestler also developed conjunctivitis concurrently. Viral cultures and serologic studies were not performed on the other wrestlers.

On the advice of the wrestling coach, most of the involved wrestlers were evaluated by their physicians. Each of the athletes was informed that he had a noncontagious bacterial skin infection and was allowed to continue wrestling. Several new cases occurred on the team over the next four weeks. Moreover, coaches from six other wrestling teams in the Kansas City Metropolitan area reported that vesicular skin lesions developed in some of their wrestlers following competition against the team described above.

Measures taken to alleviate the outbreak included cleansing of wrestling room floors, walls, and mats with a phenolic cleaner twice daily and suspension of all practice sessions and meets. The incidence of new skin infections decreased dramatically, although new cases did occur sporadically over the next several months.

Discussion

The term "herpes gladiatorum" was first introduced by Selling and Kibrick in 1964 to describe an outbreak of herpetic skin lesions on an amateur wrestling team.[1] The terminology has been disputed, with the suggestion that "herpes luctatorum" would be more appropriate (luctator — Latin for wrestler).[2] Nonetheless, the term appears to be solidly entrenched in the medical literature.

The pathogenesis of this illness involves viral inoculation from asymptomatic carriers or infected individuals into areas of skin trauma in their uninfected opponents. Wrestling predisposes the athletes to traumatic skin lesions in a variety of circumstances, including development of so-called "mat burns."[3] Herpes simplex virus can be isolated from oral and lacrimal secretions of 0.75% to 5% of healthy persons and presumably could be inoculated easily into traumatized skin. In wrestling maneuvers such as "locking-up" or "cross-face maneuvers," the wrestler's head comes into contact with the opponent's cheek, head, and neck.[4] In right-handed individuals, such contact generally occurs on the right side of the body; consequently, most herpetic skin lesions in wrestlers occur on the right face and neck and on the flexor surfaces of the wrists.

Primary HSV infections are often associated with fever, malaise, painful regional lymphadenopathy, and extensive skin or mucous membrane lesions. These findings have been reported frequently among wrestlers with herpes gladiatorum,[1, 4] indicating that this illness represents primary HSV infection rather than reactivation of virus. During the course of primary infection, ocular involvement can occur; this particularly serious complication is manifested by follicular conjunctivitis or blepharitis. Although this process usually resolves spontaneously, permanent impairment of vision has been reported.[5] Differential diagnosis of vesiculopustular skin lesions occurring in wrestlers includes pyoderma, contact dermatitis, herpes zoster, rickettsialpox, and vaccinia. Diagnosis is further complicated by the fact that many herpetic infections are secondarily infected with staphylococci or streptococci.

The authors are aware of only four previously reported outbreaks of HSV infection in wrestlers (Table 1). The first, published in 1964, involved five members of a 30-man amateur wrestling team and one gymnast who assisted a wrestling member in some maneuvers.[1] The athletes were initially thought to have rickettsialpox; retrospective diagnosis of Type I HSV infections were made on the basis of increasing neutralizing antibody titers after the third athlete was found to have a positive viral culture from a skin lesion. Three additional epidemics were described in the literature in 1965.[3, 4, 6]

In addition to these reports of herpetic skin lesions in wrestlers, a similar phenomenon has been noted in rugby football players.[7-9] Involved rugby players are generally members of the rugby scrum. In particular, players positioned on the front row of the scrum are affected significantly more often than are members of the second and back rows. Complications of the infection in one report included follicular conjunctivitis in two players and sacral ganglionitis in a third.[7] Bacterial skin infections ("scrum strep")

Table 1

Herpes Gladiatorum Epidemic in Wrestling Teams

Authors	*Clinical Setting*	*Personnel Involved*	*Complications*	*Basis of Diagnosis*
Selling & Kibrick[1]	Amateur wrestling team (30 members)	5 wrestlers 1 gymnast who assisted with maneuvers	Hospitalization[3] Keratoconjunctivitis[1]	Rise in antibody titer,[4] positive viral culture[2]
Wheeler & Cabaniss[4]	University of Georgia wrestling team (30 members)	6 wrestlers on team; probable spread to 3 members of competing team	None	Positive viral culture,[4] characteristic skin biopsy[1]
Porter & Baughman[3]	Dartmouth University wrestling team (19 members)	2 wrestlers on team; probably 84 cases on competing teams	Conjunctivitis[1]	Tzanck test[7]
Dyke, et al[6]	University of Maryland wrestling team	17 wrestlers on team, 1 female friend	Not reported	Not reported

also have been reported to occur in epidemics among rugby players.[10]

Infection control measures for prevention of herpes gladiatorum have not been well established. The mode of transmission is direct contact with infected skin lesions or secretions.[11] Inanimate objects such as mats and head gear are not believed to contribute significantly to the spread of viral particles. In settings in which multiple athletic groups have used the same mats, no cross infection has been noted in non-wrestlers. HSV is known to be unstable on inanimate objects, as it can live only a short time outside its host.

One approach to an epidemic in a high school wrestling team included the following measures: bathing in hot water with antiseptic soap; inspection by the coach prior to entering the wrestling room; daily cleansing of clothes, mats, and floor areas; and restricted use of the wrestling rooms.[6] A dramatic decrease in incidence of skin infections among the wrestlers was noted over the next two seasons following institution of these precautions. In general, most authorities recommend that wrestlers with active skin lesions should be barred from practice sessions and meets.

Although most lesions will disappear spontaneously, treatment with oral acyclovir may reduce the duration of viral shedding and decrease the time to lesion crusting and healing.[12] Secondary staphylococcal or streptococcal infections occur frequently, and should be treated with appropriate antibacterial agents.

In summary, viral infections including "herpes gladiatorum" are potential sources of epidemics among high school wrestlers. These infections can be overlooked easily by physicians who are unfamiliar with their clinical manifestations. Prompt diagnosis and treatment of cutaneous herpes simplex virus infections, together with institution of appropriate infection control techniques, are essential to prevent epidemic spread in wrestling teams.

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Lack of Effect of Dietary Oats on Serum Cholesterol

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A study of the effect of adding rolled oats to the diet of study subjects revealed no appreciable change in the subjects' serum cholesterol levels. The seasonal variation in blood cholesterol levels in normal individuals is discussed in light of these findings.

Serum total and HDL cholesterol levels are established predictors of coronary artery disease. The lower the total cholesterol or the higher the high density lipoprotein (HDL) cholesterol, the lower the likelihood that an individual will have clinically evident coronary disease.[1] Some studies have suggested that the addition of rolled oats and oat bran to the existing diet is associated with a reduction in serum cholesterol.[2, 3] Others have found this effect to be insignificant.[4] This study was designed to evaluate the effects on serum total cholesterol (TC), total HDL cholesterol (HDL-T), and its subfractions HDL-2 cholesterol (HDL-2), and HDL-3 cholesterol (HDL-3), of adding rolled oats to the diet.

Materials and Methods

Fifty-two volunteers, 26 men and 26 women, were recruited for the study. Participants were instructed to include rolled oats in their usual diet; one-half cup of dry, uncooked oats per day for women and two-thirds cup for men. They were told to prepare the oats in any manner they preferred. Most cooked the oats as a hot breakfast cereal. Oats were to be eaten at least five of every seven days during the "on oatmeal" months and no more frequently than once a week during the "off oatmeal" months. Participants were randomly placed in two groups whose oatmeal consumption alternated for three-month periods; one group excluded oats while the other included them.

Blood samples were collected weekly for four weeks and the measured cholesterol levels averaged to establish baseline levels for each participant. Subsequently, samples were collected monthly. Sera were stored at −20° C until analyzed.

Total cholesterol (TC), HDL-T, and HDL-3 were measured on the Paramax Analytical System (American Dade Chemistry Systems). There was an analytical bias of −5.89% for the TC assay when compared with the Centers for Disease Control (CDC) confirmatory values on College of American Pathologists (CAP) Survey specimens. The day-to-day standard deviation (SD) of quality control for TC with means of 123.74 mg/dL and 215.13 mg/dL was 2.47 mg/dL and 4.28 mg/dL, respectively.

The modification by Talameh et al[5] of the dual precipitation method of Gidez et al[6] was used to isolate HDL-T and HDL-3. The HDL-2 values were calculated by subtracting HDL-3 from HDL-T. The HDL determinations were standardized using CDC reference values for Omega Lipid Fraction Control (Cooper Biomedical). The day-to-day SD of quality control for HDL-T with means of 41.13 mg/dL and 27.60 mg/dL were 1.47 mg/dL and 1.26 mg/dL, respectively. The HDL-3 values with means of 10.08 mg/dL and 2.71 mg/dL had respective SD of 1.81 mg/dL and 0.78 mg/dL. A repeated measures analysis of variance was performed on the data using SPSS-X, release 2.2, for IBM VM/CMS.

Compliance questionnaires were completed after the study was finished. The study was approved by

Table 2

Mean HDL-T, HDL-2, and HDL-3 results in mg/dL for both subject groups.

	Total HDL		*HDL-2*		*HDL-3*	
Month	*Group 1*	*Group 2*	*Group 1*	*Group 2*	*Group 1*	*Group 2*
00 OCT	55	53	22	22	33	31
01 NOV	*55	51	*22	21	*33	30
02 DEC	*53	55	*23	22	*32	33
03 JAN	*54	52	*20	19	*33	33
04 FEB	59	*55	20	*18	39	*37
05 MAR	60	*60	20	*20	40	*40
06 APR	62	*60	21	*20	42	*40
07 MAY	*52	56	*16	19	*36	37
08 JUN	*56	59	*16	19	*39	40
09 JUL	*57	61	*17	18	*40	41
10 AUG	58	*59	18	*19	40	*40
11 SEP	59	*63	20	*23	39	*40
12 OCT	56	*60	20	*21	37	*39

* Indicates "on oatmeal" months.

the Institutional Review Board of St. Luke's Hospital of Kansas City.

Results

Forty-five people finished the study, including 21 men and 24 women. All had eaten the prescribed oatmeal at least five days each week during their "on oatmeal" months and less than one day each week during their "off oatmeal" months. Their exercise patterns did not change during the year of the study, nor did they have significant changes in their weight. Their general diets did not change. Fiber content of the diets was not calculated. Significant medications had not been added or deleted. Five men and two women withdrew from the study, three because they left the area and four because they found the quantity of oatmeal required to be unacceptable on a daily basis.

In general, adding rolled oats to the diet had little effect on TC, HDL-T or its subfractions, HDL-2 and HDL-3. The changes that occurred through the study year tended to follow the seasonal change in cholesterol levels, rising in the winter and falling in the summer.

Table 1 contains the mean TC results for both subject groups as well as results from a previous unpublished study used to confirm the seasonal variation in TC. The tables combine the data from the men and women since there was no significant difference between the groups. The mean values for the groups were different because of the random makeup of the groups, but the lack of response to the dietary oatmeal was the same.

Table 2 contains the mean HDL-T, HDL-2, and HDL-3 results for both subject groups. As with TC, there was no significant effect of adding oatmeal to the diet. The seasonal change that is manifest in TC is not apparent in HDL-T, nor in HDL-2 or HDL-3.

Table 1

Mean total cholesterol results in mg/dL from both subject groups and the control group.

Month	*Control*	*Group 1*	*Group 2*
00 OCT	191	205	183
01 NOV	199	*197	177
02 DEC	187	*213	199
03 JAN	203	*189	180
04 FEB	213	204	*175
05 MAR	207	211	*188
06 APR	201	210	*187
07 MAY	194	*206	196
08 JUN	188	*202	185
09 JUL	184	*193	176
10 AUG	189	206	*185
11 SEP	202	196	*194
12 OCT	191	193	*193

* Indicates "on oatmeal" month.

Discussion

Our data do not support the contention that dietary supplementation with rolled oats will reduce TC. There are several possible reasons for this. Perhaps others did not consider the seasonal variation in TC. This seasonal change has been known for many years,[7] but may not be apparent in short-term studies. If studies were started as TC was seasonally declining, it would appear that dietary intervention was responsible for the decline.

Lack of compliance in our study should not account for the difference in outcome. None of the participants reported a lack of compliance. Many were hospital employees and the study was a frequent topic of conversation, which tended to reinforce conformity.

None of the participants reported significant changes in their general diet, exercise pattern or weight, each of which might affect TC. There were no significant changes in medication.

The amount of oatmeal ingested was comparable to that in other studies. Anderson et al used 100 g per day, and Van Horn et al used 2 oz a day in their subjects. We used one-half cup for women and two-third cup for men. If anything, our participants ate more oatmeal than in these previous studies.

Our results are consistent with those of Judd and Truswell,[4] even though that study was carried out using different methods. While our participants were living their own lifestyles and preparing their own food, their subjects had their lives and diets rigidly controlled in an institution. We believe that our study more nearly resembles a clinical situation in which patients might be treated for hypercholesterolemia.

Individual participants in these other studies were hypercholesterolemic, but the groups as a whole had mean values within our reference range. While no significant changes in blood lipids were demonstrated, it is possible that hypercholesterolemic patients whose diets contain only limited amounts of fiber might benefit from the addition of rolled oats to their diet.

Our data indicate that there is no direct effect of rolled oats on TC, HDL-T or its subfractions, HDL-2 and HDL-3. If rolled oats are used as a dietary substitute for items high in cholesterol and saturated fat, then possibly they may be of benefit.

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Preoperative Pulmonary Assessment of the Surgical Patient

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An understanding of the normal changes in lung function following surgery is essential to the preoperative evaluation of the patient's risk for pulmonary complications. An overview of possible complications and their precursors is presented.

Internists play a prominent role as medical consultants. Perhaps one-third to half of a general internist's new patients are seen in referral or consultation.[1, 2] One of the more frequent types of consultation that hospital-based medical consultants perform for their surgical colleagues is the preoperative consultation, of which the assessment of a patient's pulmonary status is an integral part. The goal of pulmonary assessment is to identify patients at increased risk for developing postoperative problems.

It is important to understand the *normal* changes that occur in the lung following surgery. Changes are frequently due to alterations during the perioperative period, including anesthesia, immobility, medications, supine position, changes in sensorium, and surgery itself. All these factors may affect normal lung function.

Lung Volumes

All lung volumes are decreased postoperatively. Following abdominal or thoracic surgery, patients are in pain and their vital capacity may be reduced by 50% or more. As volumes become reduced, the smaller airways of the lung begin to close. Closing volume (CV) is the lung volume at which airways are believed to undergo compression and closure.[3] Normally, CV occurs between the end-tidal point and residual volume, but in older patients and those who smoke, the closing volume may increase and cause atelectasis (Fig 1).

Pattern of Ventilation

Postoperatively, patients' tidal volumes are reduced, and their respiratory rate increases. Because of pain, deep breaths are less frequent, and with continued shallow breathing the compliance of the lung is reduced. This further promotes small-airway closure with secondary atelectasis.

Gas Exchange

Hypoxemia after surgery is caused by alveolar hypoventilation and changes in patterns of lung ventilation and perfusion. Following surgery, areas of the lung may be underventilated but continue to be perfused. This results in ventilation/perfusion ($\dot{V}/\dot{Q}$ mismatch and hypoxemia.

Lung Defense Mechanisms

Mucociliary transport, which is responsible for clearance of the lower airways, is altered by surgery. Likewise, the patient's cough reflex is inhibited, which further promotes retention of secretions and pathogens.

Pulmonary Complications

Different authors have different views as to what actually constitutes a pulmonary complication. In general, complications that arise after surgery are an extension of the normal postoperative changes which affect normal lung function.[3] Three broad categories of pulmonary complications are atelectasis, hypoxemia and infection (Fig 2).

Atelectasis

Atelectasis may be defined as closure of lung units. This complication is common because of reduced lung volumes, diminished inspiratory effort due to pain, and the tendency of small airways to collapse. Inspiration can open these airways, but the patient's postoperative smaller breaths and minimal sighing efforts can cause the lung volumes at end inspiration to fall below the closing volume. As a consequence, airways close. Parts of the lung distal to the closed airways continue to be perfused but are no longer ventilated. This results in the collapse of distal lung units, or atelectasis.[4] This may vary from gross atelectasis (macroatelectasis), which is seen on chest roentgenogram, to the clinically undetectable microatelectasis. The collapse of lung units often results in collapsed alveoli which are perfused but not ventilated, causing increased arterial-venous shunting. This is associated with hypoxemia. The frequent development of arterial hypoxemia in the perioperative period indicates that microatelectasis is common.

Hypoxemia

Changes in position, atelectasis, anesthesia and other factors change the balance between ventilation and perfusion in the lungs, and reduction in the arterial PO_2 may result.

Infection

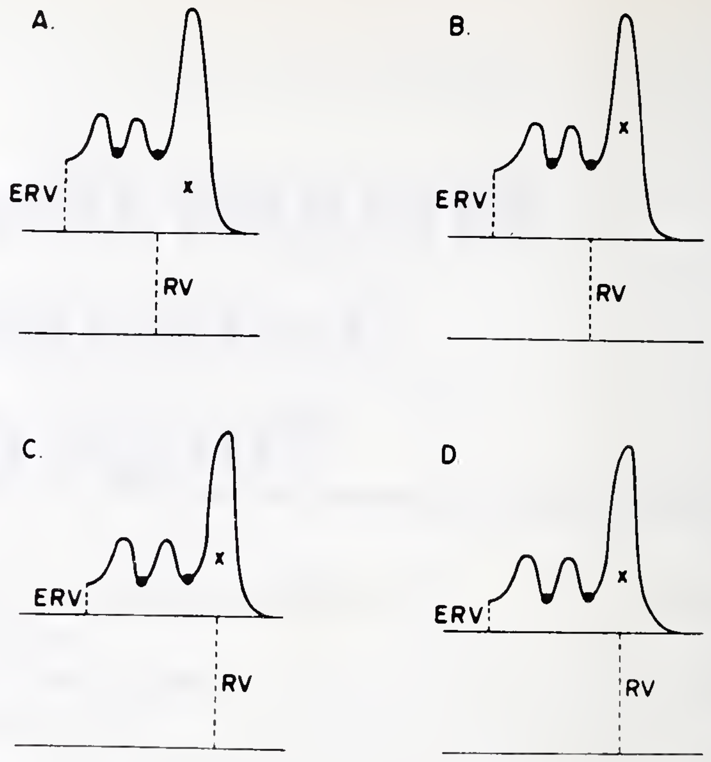
Anesthesia may interfere with the integrity of the mucociliary system, cough becomes inhibited, secretions are retained, and pathogens may fail to be cleared. Patients may develop bronchitis and pneumonia as atelectasis and hypoxemia further aggravate the situation.

Preoperative Evaluation

History

A meticulous history is a must in determining whether or not a patient is at risk for developing problems following surgery. Certain conditions are believed to be associated with an increased complication rate. Brief discussions of these conditions follow.

Age. Like an old car, the elderly lung just doesn't function as well as when it was young. It may function properly for the routine chores of the day, but pulmonary reserve may be compromised when stressed, as with surgery. Studies have shown that vital capacity at age 70 falls to about 75% of adolescent values.[5] Anything that further reduces lung volumes (obesity) or lowers tidal volume (upper abdominal incision) may lead to early airway closure. Ventilatory responses to oxygen and carbon dioxide may also be altered in the elderly, which may further compromise breathing during the perioperative period. With age, there is further widening of the alveolar-arterial PO_2 difference. Although studies are not available to show that elderly patients have deficient lung defense mechanisms, prolonged changes in the sensorium due to anesthesia and narcotics may further compromise these patients' ventilatory responses. Cough may also be inhibited, leading to aspiration, atelectasis and infection.[6] The consultant must decide whether the patient has enough pulmonary reserve to tolerate the surgery.



Relationship between closing volume (CV) and expiratory reserve volume (ERV)[3] (Reprinted with permission of *American Review of Respiratory Diseases.)*

Fig 1A. Normal CV less than ERV and below end-tidal point.

Fig 1B. Smoker has increased CV that is larger than the normal ERV and above the end-tidal point.

Fig 1C. Obese patient with decreased ERV.

Fig 1D. Postoperatively, normal patient has reduced ERV. Even a normal CV becomes larger than ERV and is above the end-tidal point. In an obese patient, a smoker, or a patient with airway disease, the CV would be even farther above the ERV during the postoperative period.
● = end-tidal point
x = closing volume
ERV = expiratory reserve volume
RV = residual volume

Obesity. The obese patient has historically been considered at increased risk for general surgery. How-

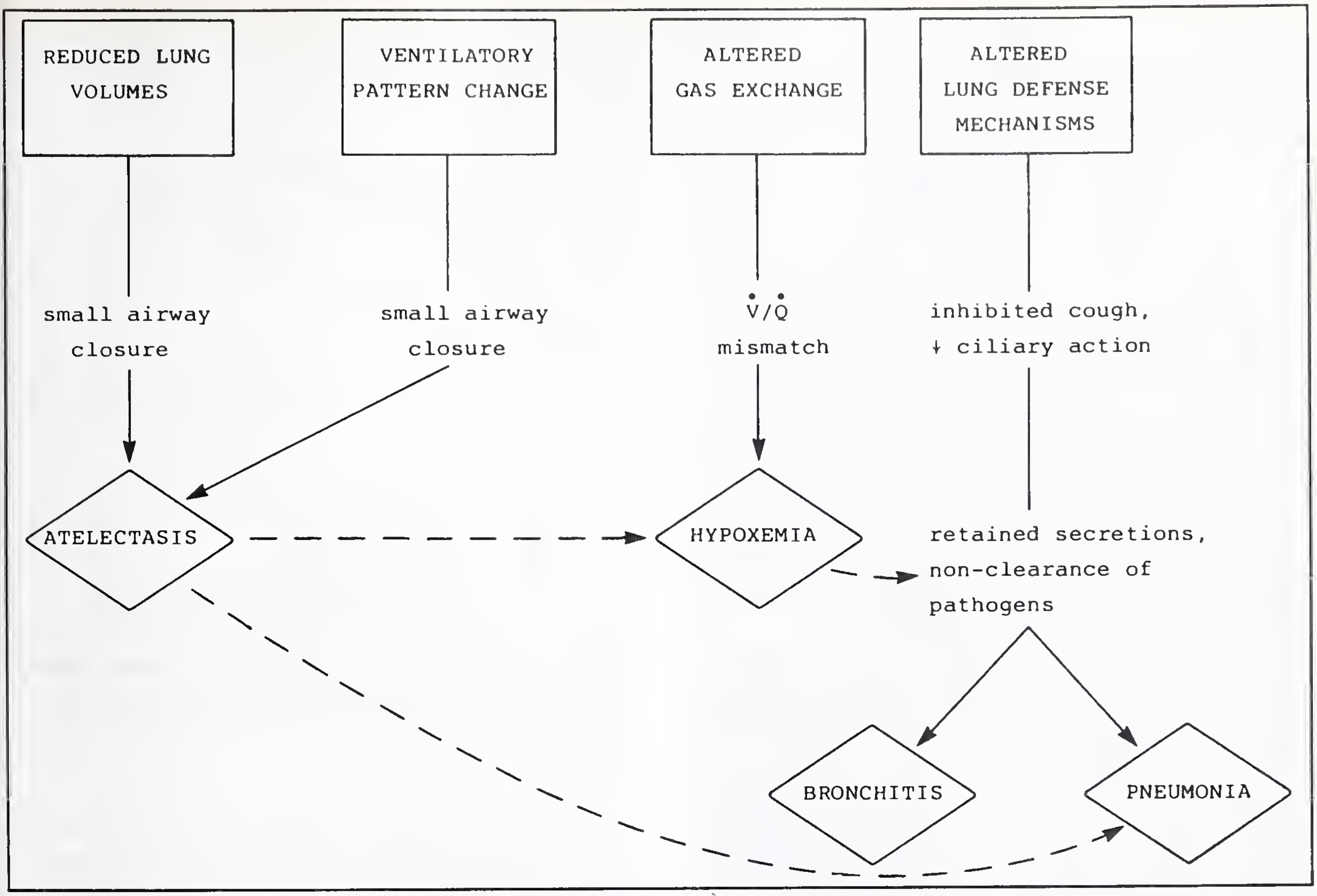

REDUCED LUNG VOLUMES
VENTILATORY PATTERN CHANGE
ALTERED GAS EXCHANGE
ALTERED LUNG DEFENSE MECHANISMS
small airway closure
small airway closure
$\dot{V}/\dot{Q}$ mismatch
inhibited cough, ↓ ciliary action
ATELECTASIS
HYPOXEMIA
retained secretions, non-clearance of pathogens
BRONCHITIS
PNEUMONIA

Fig 2. Sequence of events that leads to pulmonary complications following surgery.

ever, few prospective studies have actually shown increased morbidity and mortality among the obese.

Obesity may be associated with pulmonary dysfunction. In a recent study of young, healthy, moderately to severely obese adults, significant decreases in vital capacity, expiratory reserve volume (ERV), total lung capacity, residual volume and maximum voluntary ventilation, were noted in the severely obese patients (weight-to-height ratio > 1). Less obese subjects were in the normal range for pulmonary function.[7] Since the ERV is frequently reduced in obese patients and may be smaller than the closing volume, further early airway closure may occur in these patients. In addition to impaired pulmonary mechanics, obese subjects have pulmonary ventilation and perfusion problems that may be aggravated by surgery and anesthesia.[8]

Changes in pulmonary function due to surgery may be tolerated well by the young, healthy obese patient. However, certain co-morbid conditions such as obstructive lung disease or advanced age may be associated with an increased incidence of post-operative complications in the obese patient.[9]

The anesthesiologist may encounter technical problems in dealing with the obese patient. Venous and arterial access may be difficult, and cannulation procedures can be time-consuming. Landmarks for regional anesthesia are often vague and ill-defined. Respiratory movements are obscured, making cardiorespiratory monitoring less than ideal. The intubation process is also technically more difficult due to increased tissue mass. Even nursing staff duties, such as proper body positioning, becomes more difficult, due to the sheer bulk of some patients.[10] Obese patients have also been shown to develop the obesity-hypoventilation (Pickwickian) syndrome and may be prone to upper airway obstruction and sleep apnea. Such patients should be identified prior to surgery because the use of various hypnotic agents and sedatives may aggravate the condition and provoke a life-threatening situation.

Smoking. Smokers have been reported to have a 4 to 6 times higher rate of developing postoperative pulmonary complications than non-smokers. The higher incidence has been attributed to the bronchitic effects of smoking, with increased mucus production and difficulty clearing of secretions.[11, 12] Authors also speculate that smokers have a higher closing volume, which may predispose them to atelectasis and postoperative hypoxemia (Fig 1). However, smoking also predisposes the individual to pulmonary and coronary artery disease; the operative risk in smokers may be due to associated cardiopulmonary disease.[13]

Lung Disease. Pre-existing lung disease is fre-

Table 1

Indicators of High Risk for Developing Postoperative Pulmonary Complications

FEV1	<	50% predicted
FVC	<	50% predicted
MVV	<	50% predicted
PaCO2	>	45 torr

quently considered the most important risk factor in the pulmonary evaluation of the surgical patient. In one study, one of every three patients with obstructive airway disease developed significant respiratory complications, compared with only one complication in 33 patients with normal pulmonary function.[14]

Restrictive lung disease seems to impose less of a hazard than obstructive lung disease, especially in a non-smoker. Expiratory rates are preserved in the stiff lung, cough mechanisms remain intact, and excessive secretions are not a problem.[15]

Type of Surgery. Abdominal surgery carries a higher pulmonary complication rate than non-abdominal surgery, and upper abdominal incisions carry the highest risk. After abdominal surgery, excursions of the abdomen are diminished and vital capacity may fall to approximately 25-50% of preoperative values. It may take more than seven days before capacity returns to normal (Fig 3).[3, 16] Complications following upper abdominal surgery are probably due to diaphragmatic dysfunction and cough suppression. A recent report showed diaphram function was reduced in 15 patients after undergoing a cholecystectomy.[17] These patients experienced reduced diaphragm activity postoperatively with a shift from predominantly abdominal to rib cage breathing, very similar to the type seen in patients with bilateral diaphragmatic paralysis. The origin of the dysfunction is unknown but may be related to postoperative pain or perhaps a reflex inhibition of phrenic nerve output.[17, 18]

Thoracic procedures. Lung resection procedures also have a high incidence of postoperative problems, the severity of which depends upon the presence of underlying lung disease and the amount of functional lung tissue resected. Interestingly, patients who undergo thoracotomy with limited pulmonary resection may have fewer problems with cough and atelectasis than patients with upper abdominal operations. Vital capacity and hypoxemia may revert to preoperative levels more quickly following thoracotomy.[19] Patients undergoing lung resection require a more extensive evaluation, beyond the scope of this paper. We recommend consultation with a pulmonary specialist because predicting postoperative pulmonary function may be difficult.

Anesthesia. Anesthetics do affect pulmonary function during surgery. General anesthesia reduces the compliance of the chest wall and the lung itself. The resting volume of the lung (FRC) is reduced, especially in the supine position. Because FRC is diminished, many patients breathe at lung volumes below the closing volume of the small airways, causing some alveoli to be poorly ventilated and resulting in hypoxemia. Also, the dynamics of diaphragmatic motion are altered in the anesthetized and paralyzed subject, which further disturbs the matching of ventilation and perfusion and contributes to worsening hypoxemia.[20]

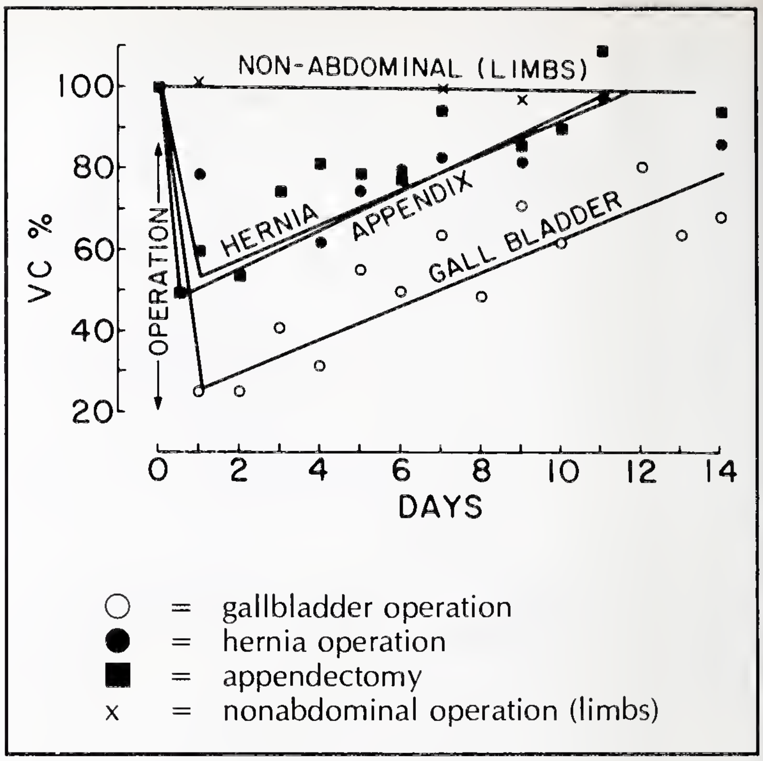


Fig 3. Change in vital capacity (VC) following surgery. VC expressed in percentage of preoperative value.[16] (Reprinted with permission of *Surgery, Gynecology & Obstetrics*)

Many physicians share the belief that regional anesthesia protects the patient from postoperative pulmonary complications. Studies have failed to show any real difference.[21, 22] On the contrary, one might argue that with general anesthesia the anesthesiologist is better able to control tidal volumes, maintain an adequate airway, and allay the fears of patients who are afraid of being awake during the operative procedure.[23]

In some studies the duration of anesthesia and surgery has been directly related to an increased incidence of postoperative complications. Other studies do not confirm this. It does seem likely, however, that if the lungs are "assailed" by anesthetic agents and physical trauma for a longer time, complications may be more likely to occur.

Physical Examination

The physical examination is performed to confirm any suspicions elicited by the history and to pick up any subtle signs of underlying lung disease not elicited by history. Breathing patterns should be observed and the quality of breath sounds noted. Hyperresonant lung fields, wheezing, prolonged expiratory time, use of accessory neck muscles and increased antero-posterior diameter of the chest are warning signs of chronic obstructive lung disease. Physical findings consistent with right heart failure and pulmonary hypertension, as well as obesity are worrisome. An interesting physical sign, which may be useful in screening patients for cigarette smoking and possible underlying obstructive airway disease, is the so-called "smoker's face." A recent study[24] noted a relationship between smoking and a person's appearance. The "smoker's face" can frequently be confirmed by deep facial wrinkles, prominent underlying bony contours with atrophic and slightly grey skin. A plethoric, slightly orange, purple and red complexion may also be present, different from the cyanotic or bloated appearance associated with alcoholism. The facial features do not appear to be attributable to the aging process alone, and by bringing these anatomic changes to the individual's attention, you might just induce the patient to stop smoking!

Certain bedside maneuvers are useful for detecting obstructive airway disease in the prospective surgical patient.

Forced Expiratory Vital Capacity (FEVC). The patient is asked to complete a forced expiration after maximal inspiration while the physician listens with a stethoscope over the patient's trachea. Normally, the FEVC takes less than 4 seconds. An expiratory time in excess of this suggests airway obstruction.

Peak Expiratory Flow Rate (PEFR). This maneuver involves the use of a peak flow meter. After taking a maximal inspiration, the patient expires rapidly into the device. Useful information regarding large airway obstruction is obtained, but the technique is not sensitive in detecting mild disease. This is a useful tool in monitoring the patient during the perioperative period.

Match Test. This simple test involves the patient taking a maximal inspiration followed by a rapid expiration with an open mouth while attempting to extinguish a match at a distance of 6 inches. The ability to blow out the match reflects forced expiratory volume in one second (FEV1) > 1.5 liters, and a maximum voluntary ventilation (MVV) > 60 liters per minute.

Stair Climbing. This traditional test has withstood the test of time, especially as a predictor of pulmonary function prior to lung resection. In a recent pre-surgical evaluation of patients undergoing thoracotomy, 97% of patients who completed more than three flights of stairs had an FEV1 > 1.7 liters.[25]

All of the above tests are simple, easy to perform at the bedside (or a nearby staircase) and can provide useful information as to the presence of underlying lung disease. However, once the initial evaluation has been concluded, the physician may need more reliable data concerning the patient's pulmonary function status. Inexpensive, reliable spirometric testing is now available, including arterial blood gas analysis, that can further help the physician make correct decisions about the operability of the patient.

Laboratory Evaluation

After completing the history and physical examination the consultant must decide if further laboratory testing is necessary in evaluating the patient's pulmonary status. The 32-year-old, non-smoking male patient with a normal physical examination who is having an elective hernia repair probably requires no further evaluation. However, the 55-year-old, obese smoker with productive cough who is admitted for the same procedure should have further studies prior to surgery.

Chest X-ray. (Cost: PA and Lateral $56-67*) In many cases, the preoperative chest x-ray film is now considered an extension of the routine history and physical examination rather than a specific diagnostic tool. It is not a particularly sensitive screening test, and by the time roentgenographic changes consistent with obstructive airway disease appear, the patient usually has symptoms or signs on physical examination. In a large British study of patients undergoing non-cardiopulmonary surgery, routine preoperative chest radiographs failed to influence the choice of anesthesia or even the decision to operate. Interestingly, 26% of the radiologists' reports were not available until after the surgical procedure. The study also argues against the use of the routine chest x-ray as a baseline for postoperative management in those patients who might develop pulmonary complications.[26]

Other studies have shown a low yield for preoperative chest x-ray films taken in patients under 30 years of age.[27] In one report, more than 50% of the "significant" abnormalities noted preoperatively were due to cardiomegaly, with the greatest percentage of these individuals being over 59 years of age. Also, 38% of this group of patients had had chest x-ray films taken within 12 months prior to their surgery.[28]

The sad truth may be that in the daily routine of our busy medical practices it is easier to order the admission chest radiograph than to think about the reason for ordering it.

Although still controversial, preoperative chest radiographs may be recommended in the following situations:

(a) Patients with known cardiopulmonary disease or suggested by history and physical examination
(b) Patients with pulmonary risk factors
(c) Patient over age 40 (Lateral chest radiograph may be eliminated, especially if patient is asymptomatic)
(d) Patients undergoing thoracic surgery

EKG. (Cost: $50) Studies have shown that the preoperative electrocardiogram is frequently abnormal (especially ST-segment and T-wave changes), but rarely do these results change the operative planning or management of the patient. From a pulmonary standpoint, electrocardiographic changes such as right ventricular enlargement or right axis deviation may suggest more severe pulmonary disease. Overall, however, the EKG probably adds little information for patients with no cardiac symptoms or cardiac abnormalities on physical exam.[29, 30, 31]

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* **Note:** *The costs of chest x-rays, electrocardiogram, arterial blood gases and pulmonary function tests are derived from two private hospitals in the Salt Lake City area. Costs may vary in other parts of the country.*

Arterial Blood Gases. (Cost: $46) The general indications for arterial blood gas analysis are vague and a recent review of this subject[32] failed to give any specific guidelines for their use in the preoperative evaluation of surgical patients. Arterial blood gases are frequently used to determine lung resectability in patients undergoing a thoracotomy. Arterial hypoxemia need not be a contraindication to surgery as long as it can be corrected by supplemental oxygen. Hypercapnea ($PaCO_2 > 45$) on the other hand, is considered by some to be an absolute contraindication to all but life-saving surgery. Certainly hypercapnea has been shown to be a significant risk factor for postoperative complications as it denotes significant pulmonary impairment with little respiratory reserve. This need not be an absolute contraindication to nonthoracic surgery, however, if a reversible cause, such as infection, acute bronchospasm or congestive heart failure, exists. Patients with known or suspected respiratory impairment should have arterial blood gas analysis performed. These individuals may require prolonged mechanical ventilation after surgery and baseline PaO_2 and PaO_2 values are helpful in the postoperative period.

Pulmonary Function Testing. (Cost: simple spirometry = $23-46, Pre and post-bronchodilator = $46-66, Pre, Post and MVV = $76-82) Numerous studies have been performed to determine the "best test" to detect patients at increased risk for pulmonary complications following surgery. Abnormal results of such tests as FEV1, FVC, FEV1/FVC and FEF 25-75 (Table 1) have been shown to indicate increased risk for postoperative pulmonary complications. All of these values can be obtained by simple spirometry or by a flow-volume study. Another study some authors feel is beneficial is the MVV or maximum voluntary ventilation (previously known as the MBC, or maximum breathing capacity). In this study the patient is instructed to breathe deeply and as rapidly as possible for 12 to 15 seconds. The maximal ventilation in 12 seconds is calculated and multiplied by 5, to be expressed in liters per minute. An MVV less than 50% of the predicted value is associated with increased postoperative complications. The MVV can be predicted from the FEV1 value (FEV1 × 40 = predicted MVV) and a disproportion between the predicted and the actual value may provide valuable information about the patient's effort and muscle strength (especially diaphragmatic muscle strength).

Lung volumes and diffusing capacity for carbon monoxide (DLCO) cannot be derived from spirometry and do not add to the predictive ability of the previous tests. Other studies, such as compliance and closing volumes, are not readily available in the pulmonary function laboratory.

The next question is, which patients should receive clinical spirometry testing? When the physician takes a meticulous history and performs a comprehensive physical examination, pulmonary function studies probably add little to the pulmonary evaluation. However, spirometry may act as a "red flag" to let the physician know that the patient may be at some pulmonary risk. Although authors are not in total agreement, the following is a list of patients for whom preoperative spirometry may be indicated:

(a) Patients with a history of pulmonary disease
(b) Patients with pulmonary symptoms or an abnormality found on physical examination
(c) Patients with a history of smoking
(d) Patients with an abnormal chest radiograph
(e) Patients with more than one risk factor

For example, a young healthy patient undergoing upper abdominal surgery may not require pulmonary function testing, whereas an obese or elderly patient undergoing upper abdominal surgery should have preoperative spirometry.

Prevention of Complications

The primary aim of the preoperative evaluation is to identify the high-risk patient and to take steps to prevent postoperative morbidity. Early papers have shown that if appropriate preventative measures are instituted prior to surgery, the complication rate can be reduced. Of the three broad categories of pulmonary complications (Fig 2) atelectasis is most common.

A myriad of clinical studies have outlined various respiratory maneuvers to prevent atelectasis. In general, the measures are designed to simulate normal tidal breathing with periodic sighing. Various devices such as blow bottles, intermittent positive-pressure breathing (IPPB), and incentive spirometry have become popular. In addition, chest physiotherapy, including postural drainage and coughing, may also be used. The basic conclusion of these studies is that proper lung inflation is the most important ingredient in preventing postoperative atelectasis. Maneuvers designed to accomplish this should be performed frequently, whether with devices or spontaneously.

Blow bottles and cough have been used postoperatively but these are *expiratory* maneuvers, and their benefit arises only from the inspiration that precedes the maneuver. Also, the abdominal muscles are used in expiration, and it may be more painful for patients to cooperate. Coughing is important for the patient with excessive secretions but still should be combined with deep inspiration. Carbon dioxide rebreathing and other hyperventilation methods increase the minute ventilation, but tidal volume does not increase unless periodic sighs are incorporated.

A recent prospective study compared patients receiving one of three methods of respiratory therapy (IPPB, incentive spirometry and deep breathing exercises), performed four times daily, with a fourth control group receiving no respiratory treatment.[33] Following abdominal surgery, patients in each of the respiratory therapy groups developed fewer postoperative pulmonary complications than those in the control group.

Side effects, including abdominal distention and bloating, were common in patients undergoing IPPB following surgery. Other reported risks of IPPB include pneumothorax, bacterial contamination, reduced cardiac output, and disruption of the bowel suture line. Advantages of incentive spirometry and deep breathing exercises are their lower expense and lack of side effects. Deep breathing exercises have the added advantage of not requiring a mechanical device. It is important that maximal lung inflation be carried out frequently, at least 10 times per hour around the clock. Other general measures, such as early ambulation, smoking cessation, bronchodilators for relief of bronchospasm, antibiotics for control of infection, and adequate coughing, are also important.

A Word About Smoking Cessation

Smokers are at increased risk for developing postoperative pulmonary complications. As physicians, we can all remember telling the patient ". . . and also, Mr. Smith, it is very important that you stop smoking over the next two days so we can get you through your operation without problems." Unfortunately, although much is known about the adverse effects of smoking, few substantial data are available regarding smoking cessation. Smokers do develop small-airway dysfunction, they do have trouble with tracheobronchial clearance of their secretions, and they may have altered local lung immune responses, which can lead to perioperative complications. However, these abnormalities have *not* been shown to improve following short-term abstinence from smoking. It may require abstinence of at least 6 to 8 weeks to significantly influence respiratory morbidity.[34, 35]

There are certain short-term cardiovascular benefits to smoking cessation. Cigarette smoke contributes to increasing levels of carbon monoxide and nicotine in the body. Carbon monoxide reduces oxygen supply at the tissue level, and nicotine increases myocardial oxygen demand. Only about 12 to 24 hours are needed to eliminate these substances from the body.[34]

This does not mean we should discontinue our efforts to dissuade the patient from smoking. The presurgical period remains an excellent opportunity for medical personnel to educate the smoker about the risks of chronic obstructive lung disease and cardiovascular disease, as well as lung cancer.

Conclusion

In summary, internists should be aware of the normal physiological functions of the lung, and should know the various complications that may arise during the perioperative period. A meticulous history and thorough physical examination will reveal most patients at increased risk for developing complications. Laboratory evaluation may better define the higher-risk patient so the physician can prescribe more aggressive respiratory therapy and notify the respiratory therapist. Screening procedures such as spirometry, arterial blood gas analysis and a chest x-ray are relatively inexpensive compared with the cost of treating a postoperative complication. A schematic representation of the approach to pulmonary assessment appears in Figure 4.

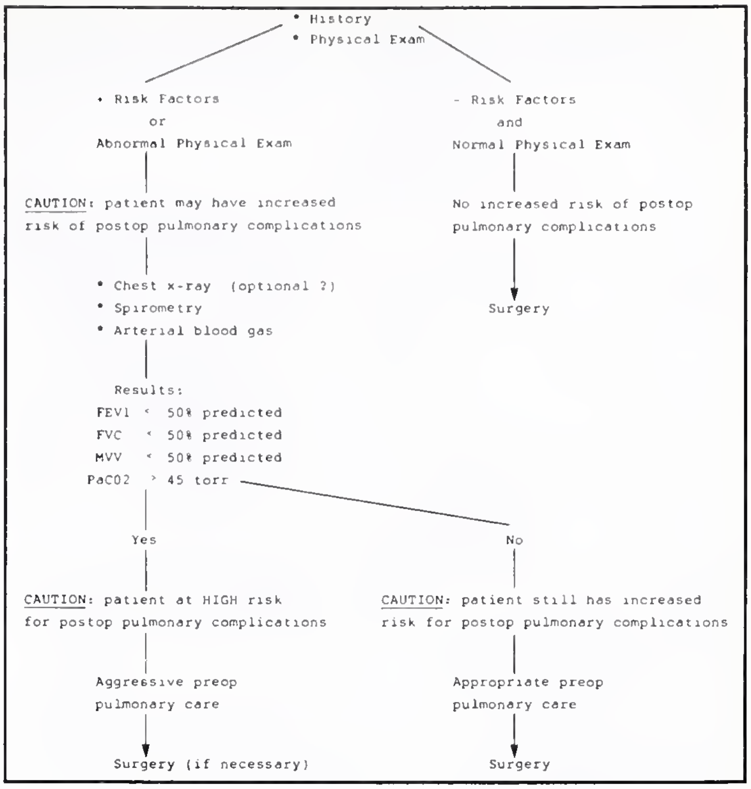
• History
• Physical Exam
• Risk Factors
or
Abnormal Physical Exam
- Risk Factors
and
Normal Physical Exam
CAUTION: patient may have increased risk of postop pulmonary complications
No increased risk of postop pulmonary complications
Surgery
• Chest x-ray (optional ?)
• Spirometry
• Arterial blood gas
Results:
FEV1 < 50% predicted
FVC < 50% predicted
MVV < 50% predicted
PaCO2 > 45 torr
Yes
No
CAUTION: patient at HIGH risk for postop pulmonary complications
CAUTION: patient still has increased risk for postop pulmonary complications
Aggressive preop pulmonary care
Appropriate preop pulmonary care
Surgery (if necessary)
Surgery

Fig 4. Preoperative pulmonary evaluation of the surgical patient (non-thoracic operation).

Although no one risk factor or spirometric value renders a patient "inoperable," several risk factors place the patient into a higher priority category. These patients may not be candidates for elective surgery. Their operations may be postponed until aggressive preoperative respiratory therapy can be initiated.

The literature may be confusing to the physician seeking appropriate preventative treatment. More expensive devices (i.e. IPPB) may not be any more beneficial than encouraging patients to perform sustained deep breathing. A recent study[1] warns that compliance by requesting physicians is only about 50% when it comes to following the recommendations made by internists during the preoperative consultation. If this is true, it is imperative that internists follow their patients diligently during the perioperative period. The best laid plans may be foiled due to lack of proper follow-up after surgery.

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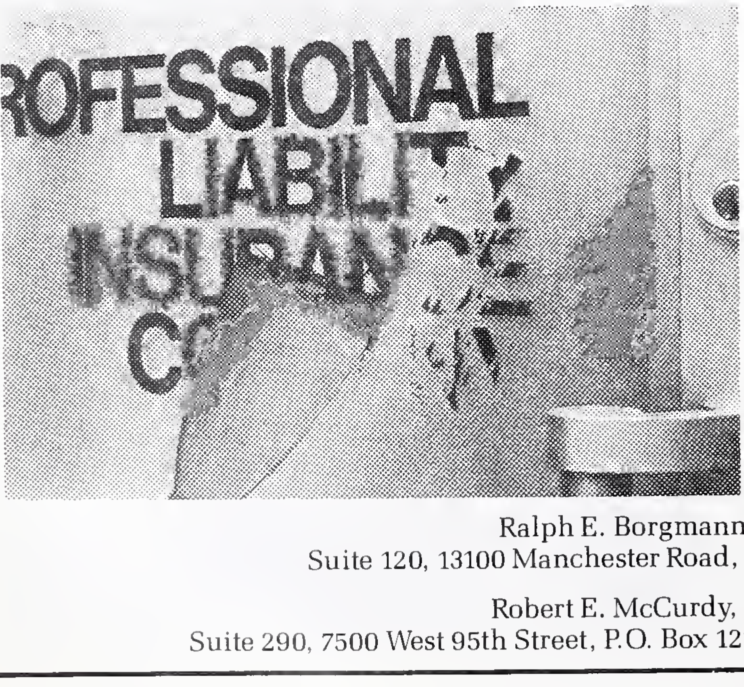

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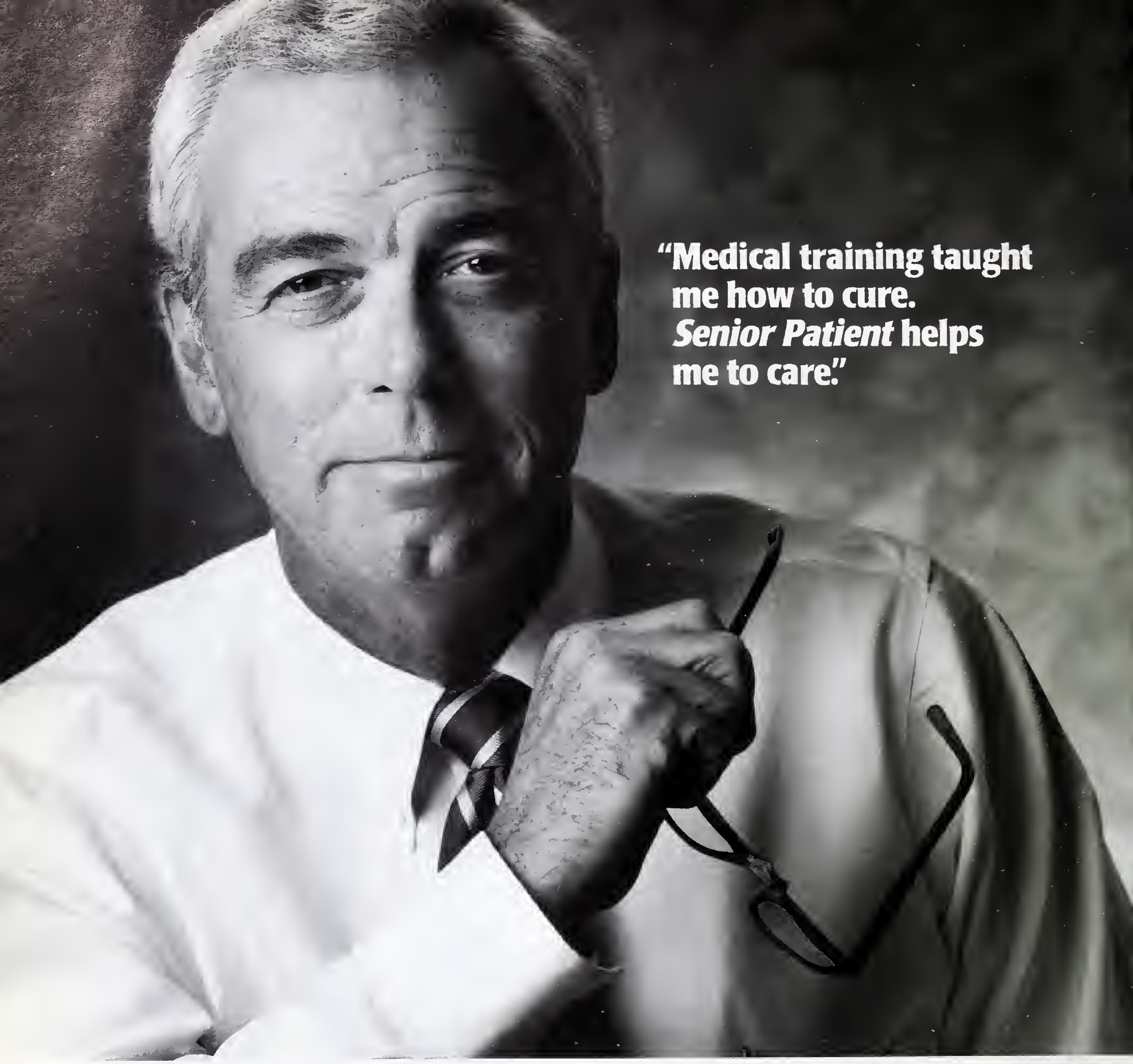
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■ **Elizabeth J. Andrews, M.D.,** 1900 South National, Suite 1900, Springfield 65804, has become a member of the Greene County Medical Society. Dr. Andrews received her preliminary education at the University of Georgia and obtained her medical degree at the Medical College of Georgia in 1984. She completed her residency at Arkansas Children's Hospital. Dr. Andrews specializes in pediatrics.

■ **Alan E. Bauman, M.D.,** 2928 Main Street, Suite 130, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Bauman received his preliminary education at the University of Oklahoma and obtained his medical degree at the University of Oklahoma School of Medicine in 1982. He completed his residency at the University of Texas Medical School, Galveston, TX. Dr. Bauman specializes in ophthalmology.

■ **Robert Cagle, D.O.,** 2700 McClelland, Bldg. B, Suite 211, Joplin 64804, has become a member of the Jasper County Medical Society. Dr. Cagle received his preliminary education at Northeast Missouri State University and obtained his osteopathic degree at the Kirksville College of Osteopathic Medicine in 1976. He completed his residency at Oklahoma Osteopathic Hospital, Tulsa, OK. Dr. Cagle specializes in otorhinolaryngology.

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■ **Leonard J. Dumonceaux, M.D.,** 1100 W. 10th Street, Rolla 65401, has become a member of the Mid-Missouri Medical Society. Dr. Dumonceaux received his preliminary education at St. John's University and obtained his medical degree at the St. Louis University School of Medicine in 1954. He completed his residency at Barnes Renard Hospital, St. Louis, MO. Dr. Dumonceaux specializes in psychiatry.

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■ **Daniel M. Goodenberger, M.D.,** 431 Wohl Clinic, Barnes Hospital, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Goodenberger obtained his medical degree at Duke University in 1974. He completed his residency at the National Cancer Institute, Bethesda, MD. Dr. Goodenberger specializes in internal medicine.

■ **Thomas B. Kibby, M.D.,** 819 Locust Street, St. Louis 63101, has become a member of the St. Louis Metropolitan Medical Society. Dr. Kibby obtained his medical degree at Eastern Virginia Medical School in 1979. He completed his residency at Duke University, Durham, NC. Dr. Kibby specializes in occupational medicine.

■ **Robert W. King, M.D.,** 1100 W. 10th, Rolla 65401, has become a member of the Mid-Missouri Medical Society. Dr. King received his preliminary education at the University of Oklahoma and obtained his medical degree at the University of Oklahoma College of Medicine in 1974. He completed his residency at the University of Oklahoma Health Sciences Center, Oklahoma City, OK. Dr. King specializes in anesthesiology.

■ **Maria M. Legarda, M.D.,** 6724 Troost, Suite 400, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Legarda received her preliminary education at the University of Santo Tomas and obtained her medical degree at the University of Santo Tomas Medical School, Manila, Philippines in 1970. She completed her residency at the University of Kansas Medical Center, Kansas City, KS. Dr. Legarda specializes in neurology.

■ **Richard J. Lombardo, M.D.,** 3535 South National, Springfield 65807, has become a member of the Greene County Medical Society. Dr. Lombardo received his preliminary education at Trinity College and obtained his medical degree at the University of Medicine and Dentistry of New Jersey in 1970. He completed his residency at at St. Elizabeth's Hospital, Elizabeth, NJ. Dr. Lombardo specializes in family practice/emergency medicine.

■ **Michael D. Maves, M.D.,** 1325 South Grand Blvd., St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Maves obtained his medical degree at the Ohio University School of Medicine in 1973. He completed his residency at Ohio State University Hospitals and Clinics, Columbus, Ohio. Dr. Maves specializes in otolaryngology.

■ **Terry E. McLean, M.D.,** 6650 Troost Ave., Suite 103, Kansas City 64131, has become a member of the Metropolitan Medical Society of Greater Kansas City.

Dr. McLean received his preliminary education at Tulane University and obtained his medical degree at the Medical College of Ohio in 1982. He completed his residency at the Henry Ford Hospital, Detroit, MI. Dr. McLean specializes in orthopaedic surgery.

■ **Jay D. McNitt, M.D.,** 4400 Wornall, St. Luke's Hospital, Kansas City 64111, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. McNitt received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas Medical School in 1984. He completed his residency at the University of California-Irvine, Irvine, CA. Dr. McNitt specializes in anesthesiology.

■ **Randall E. Meyer, M.D.,** 200 St. Mary's Medical Plaza, Suite 302, Jefferson City 65101, has become a member of the Cole County Medical Society. Dr. Meyer received his preliminary education at Southwest Missouri State University and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1982. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Meyer specializes in cardiology and internal medicine.

■ **Barbara A. Morris, M.D.,** 6400 Prospect, Suite 138, Kansas City 64132, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Morris received her preliminary education at Rosary Hill College and obtained her medical degree at the State University of New York-Upstate in 1976. She completed her residency at the Upstate Medical Center, Syracuse, NY. Dr. Morris specializes in pediatrics.

■ **C. Christopher Pittman, M.D.,** Dept. of Radiology, University Hospital/St. Louis University Medical Center, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Pittman obtained his medical degree at the University of South Florida in 1988. He is completing his residency at the University Hospital, St. Louis University Medical Center, St. Louis, MO. Dr. Pittman specializes in diagnostic radiology.

■ **Howard M. Place, M.D.,** Dept. of Orthopedic Surgery, GLWACH, Ft. Leonard Wood 65473, has become a member of the Mid-Missouri Medical Society. Dr. Place received his preliminary education at the U.S. Military Academy and obtained his medical degree at the St. Louis University School of Medicine in 1983. He completed his residency at Fitzsimons Army Medical Center. Dr. Place specializes in orthopaedic surgery.

■ **Diane M. Radford, M.D.,** 1325 S. Grand, St. Louis 63139, has become a member of the St. Louis Metropolitan Medical Society. Dr. Radford received her preliminary education at Glasglow University Facility of Science, Scotland and obtained her medical degree at Glasgow University Facility of Medicine, Scotland, in 1981. She completed her residency at Monkcarrds Hospital, Scotland. Dr. Radford specializes in surgery.

■ **James K. Ritterbusch, M.D.,** 711 Grand, Hannibal 63401, has become a member of the Northeast Missouri County Medical Society. Dr. Ritterbusch received his preliminary education at Westminster College and obtained his medical degree at the St. Louis University School of Medicine in 1981. He completed his residency at St. Louis University Group Hospitals, St. Louis, MO. Dr. Ritterbusch specializes in orthopaedic surgery.

■ **William J. Robinson, M.D.,** 24th at Gillham Road, Children's Mercy Hospital, Kansas City 64108, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Robinson received his preliminary education at the University of California-Los Angeles and obtained his medical degree at the University of Oklahoma School of Medicine in 1985. He completed his residency at Children's Mercy Hospital, Kansas City, MO. Dr. Robinson specializes in pediatrics.

■ **Frank W. Shagets, M.D.,** 2700 McClelland Blvd., Suite C305, Joplin 64804, has become a member of the Jasper County Medical Society. Dr. Shagets received his preliminary education at the U.S. Air Force Academy and obtained his medical degree at the St. Louis University School of Medicine in 1977. He completed his residency at Wilford Hall USAF Medical Center, Lackland AFB, TX. Dr. Shagets specializes in otolaryngology.

■ **Carol W. Stanford, M.D.,** 373 W. 101 Terrace, Kansas City 64114, has become a member of the Metropolitan Medical Society of Greater Kansas City. Dr. Stanford received her preliminary education at the University of Missouri-Kansas City and obtained her medical degree at UMKC in 1979. She completed her residency at Truman Medical Center, Kansas City, MO. Dr. Stanford specializes in internal medicine.

■ **Alan J. Taege, M.D.,** 5301 Faraon, St. Joseph 64506, has become a member of the Buchanan County Medical Society. Dr. Taege received his preliminary education at the University of Nebraska and obtained his medical degree at the St. Louis University School of Medicine in 1979. He completed his residency at St. Louis University, St. Louis, MO. Dr. Taege specializes in internal medicine.

■ **Paul Torres, M.D.,** 8630 North Oak, Kansas City 64155, has become a member of the Clay-Platte County Medical Society. Dr. Torres received his preliminary education at Northwestern University and obtained his medical degree at the University of Chicago in 1983. He completed his residency at the Mayo Graduate School of Medicine, Rochester, MN. Dr. Torres specializes in general surgery.

■ **Michael A. West, M.D.,** 4960 Audubon Ave., 2nd Floor Annex, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. West obtained his medical degree at the Loyola-Stritch School of Medicine in 1980. He completed his residency at the University of Minnesota, Minneapolis, MN. Dr. West specializes in general surgery.

■ **Mark D. Winton, M.D.,** 200 St. Mary's Blvd., Suite 302, Jefferson City 65101, has become a member of the Cole County Medical Society. Dr. Winton received his preliminary education at Washington University and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1983. He completed his residency at the University of Missouri-Columbia Hospital and Clinics, Columbia, MO. Dr. Winton specializes in internal medicine/infectious disease.

How You
Do The Job Is
What Matters,
Not How You Get There.

The President's Committee
on Employment of the Handicapped
Washington, D.C. 20036

Medical School News

Washington University

■ Understanding the basic cause of human disease is the focus of research being conducted by nine Washington University School of Medicine scientists whose work is supported by the first allocations from last year's $12.1 million donation from the *Lucille P. Markey Charitable Trust of Miami.*

A first-year allotment of approximately $1.8 million has made it possible for the center to award eight research grants, hire a new faculty member and purchase state-of-the-art equipment.

The Markey research grants provide one- or two-year support for novel ideas or new initiatives among the faculty. Proposals were reviewed by senior faculty members.

The first recipients of Markey grants are: **Ellen Li, M.D., Ph.D.,** assistant professor of biological chemistry and medicine, for a study of vitamin A in the intestine; **Mike Mueckler, Ph.D.,** and **David James, Ph.D.,** both assistant professors of cell biology and physiology, for research on the molecular cloning of an insulin-responsive glucose transporter; **Greg Grant, Ph.D.,** assistant professor of biological chemistry and medicine, to investigate the structure and function of certain neural poisons; **John Russel, Ph.D.,** associate professor of pharmacology, to study the structure and organization of lymphocyte genes; **Douglas Berg, Ph.D.,** professor of genetics and microbiology and immunology, to identify and characterize genes important in bacterial growth; **Elliot Elson, Ph.D.,** professor of biological chemistry, to study the effects of pressure on protein folding; **Christine Blaznski, Ph.D.,** assistant professor of ophthalmology, to investigate the physiological role of adenosine in vertebrate retinas; and **Robert Mercer, Ph.D.,** assistant professor of cell biology and physiology, to study normal and postobstructive kidneys.

In addition, diabetes researcher **David E. James, Ph.D.,** assistant professor of cell biology and physiology was hired. James, who has been a postdoctoral fellow at the school, is conducting studies to understand how insulin stimulates cellular glucose transport at the cellular/subcellular level and to determine potential targets for abnormalities that may contribute to the causes of diabetes.

The **Lucille P. Markey Charitable Trust,** one of the nation's major private supporters of basic research, was established in 1983 to distribute the estate of the late Lucille P. Markey. The trust fund's sole activity is to support and encourage basic medical research through grants, fellowships and through the Lucille P. Markey Scholar Awards in Biomedical Science.

■ **Philip W. Majerus, M.D.,** professor of biological chemistry and medicine at Washington University School of Medicine, has been elected a member of the prestigious Institute of Medicine of the National Academy of Sciences.

Majerus is one of 40 new members of the institute, which was created in 1970 to examine public health policy matters. New members are chosen by currently active members for major contributions to health and medicine or to related fields, among them social and behavioral sciences, law, administration and engineering. There are currently 14 faculty on staff at Washington University School of Medicine who are active members.

Majerus was elected to the Institute of Medicine in recognition of his research on the role of platelets in forming blood clots and for the discovery of mechanisms by which cells respond to hormones and other external agents.

Majerus has been on Washington University's faculty since 1966. He is co-director of the Division of Hematology-Oncology, principal investigator and director of the Specialized Center for Research in Thrombosis, and a physician at Barnes Hospital at the Washington University Medical Center. He graduated magna cum laude from Washington University School of Medicine in 1961.

■ **Thomas A. Woolsey, M.D.,** director of the *James L. O'Leary Division of Experimental Neurology and Neurosurgery* at Washington University School of Medicine in St. Louis, has received a $20,000 grant to help support his studies of brain function. The award, a continuation of a five-year grant, comes from the Illinois-Eastern Iowa District of the Kiwanis International Spastic Paralysis Research Foundation.

Woolsey's work centers on the organization, development and functional recovery of the brain. He is particularly interested in the long-term effects of stimulation and sensory deprivation upon the central nervous system. With the Kiwanis grant, he will continue to examine basic mechanisms and phenomena that might contribute to the treatment of spastic paralysis (cerebral palsy) and related disorders.

The *George H. and Ethel R. Bishop Scholar in Neuroscience in Neurological Surgery,* Woolsey has been director of the O'Leary division since 1984. He is a senior McDonnell neuroscientist, and a professor in three departments: anatomy and neurobiology, cell biology and physiology, and neurology and neurosurgery. He joined the faculty at Washington University in 1971, having received his medical degree in 1969 from Johns Hopkins University.

■ **Robert C. Packman, M.D.,** has been re-elected as a representative of part-time faculty members to the Executive Faculty of Washington University School of Medicine in St. Louis.

Packman's internal medicine practice is with the Maryland Medical Group. He joined the medical school faculty as an instructor in clinical medicine in 1963, and was named professor of clinical medicine in 1984. He is on staff at Barnes and Jewish hospitals at the Washington University Medical Center.

Packman received his medical degree in 1956 from Washington University School of Medicine. He completed his internship and residency at Barnes, and was a fellow in endocrinology at Duke University. He served as president of the Barnes Hospital staff from 1980-81, and has chaired the Pharmacy and Therapeutics Committee since 1963.

He is a diplomate of the American Board of Internal Medicine, a fellow of the American College of Physicians, and a member of the American Medical Association and the Society of Internal Medicine.

■ **Philip D. Stahl, Ph.D.,** *Edward D. Mallinckrodt Jr. Professor* and Head of the Department of Cell Biology and Physiology at Washington University School of Medicine in St. Louis, has been honored for his scientific contributions by receiving MERIT status for his latest grant. The five-year grant totals nearly $700,000 and is from the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health (NIH).

Stahl's research centers on the mechanisms of protein recognition, transport and degradation in macrophages, cells that help to repair the body and defend it against infection. In 1978, Stahl and his colleagues discovered a new receptor on macrophages, the mannose receptor, that binds sugar-coated proteins as well as certain microorganisms and viruses and transfers them into a cell through a process called endocytosis. Once molecules and/or organisms are selectively taken into the macrophage, they are transferred to digestive bodies within the macrophages called lysosomes, where the organisms are killed and macromolecules are disassembled.

During the next phase of his research, Stahl and his colleagues will use the mannose receptor as a model to investigate the mechanism of endocytosis and receptor-recycling.

Stahl has been on the faculty at Washington University since 1971. He received his doctoral degree from West Virginia University in 1967. From 1968 to 1970, he was an Arthritis Foundation Fellow in the Department of Molecular Biology at Vanderbilt University.

- Three faculty members at Washington University School of Medicine in St. Louis have been elected as fellows of the American Academy of Arts and Sciences.

The new fellows are **Gerald D. Fischbach, M.D.,** *Edison Professor of Neurobiology* and head of the Department of Anatomy and Neurobiology; **Stuart A. Kornfeld, M.D.,** professor of biological chemistry and medicine; and **Philip W. Majerus, M.D.,** professor of biological chemistry and medicine.

Fischbach, director of the Center for Cellular and Molecular Neurobiology, was elected to the academy in recognition of his pioneering studies of the development of embryonic neurons and muscle cells in tissue culture and the formation of functional connections between them.

Fischbach came to Washington University in 1981 from Harvard Medical School, where he was professor of pharmacology. He received a medical degree from Cornell University Medical School and a bachelor's degree in mathematics and chemistry from Colgate University.

Kornfeld, co-director of the School of Medicine's hematology-oncology division, is recognized for his research on the biochemistry of glycoproteins. His work has helped to explain the structure of the carbohydrate units of these molecules and to define the steps involved in their biosynthesis. These carbohydrate units are important because they serve as specific recognition markers in a variety of biologic reactions.

A 1962 graduate of Washington University School of Medicine, Kornfeld served his internship and residency at Barnes Hospital. He has been on the School of Medicine faculty and the staff at Barnes Hospital since 1966.

Majerus is co-director of the division of hematology-oncology. His research involves defining the mechanisms by which a blood cell responds to signals within its environment both to evoke responses inside the cell and to modify its surroundings.

Majerus joined the faculty at Washington University in 1966 after serving as a research associate in biochemistry at the National Heart Institute. He received a medical degree from Washington University in 1961 and completed undergraduate studies at Notre Dame University in 1957.

The American Academy of Arts and Sciences, founded in 1780, conducts studies that reflect members' interests and respond to societal needs. There are currently 17 faculty members at Washington University who are academy fellows.

- A researcher at Washington University School of Medicine in St. Louis has been awarded more than $1 million to study the causes of asthma and other inflammatory lung diseases.

Michael J. Holtzman, M.D., assistant professor of medicine, will receive funding from two five-year grants, one from the National Institutes of Health (NIH) and the other from the American Lung Association.

Holtzman's research focuses on the biochemistry of cells lining the lung airways. The cells are in direct contact with the environment, and might be responsible for protecting the airways, he says. He hopes to learn if and how they contribute to an inflammatory response when certain particles in the environment — such as dust, pollen and mold — are inhaled. The explanation for diseases that involve inflammation of the airways — for example asthma, bronchitis and cystic fibrosis — may lie in the normal or abnormal responses of these airway lining cells.

The NIH's Heart, Lung and Blood Institute has given Holtzman an $831,000 grant to support his studies. Also, he is one of two recipients nationwide of a Career Investigator Award from the American Lung Association. The $175,000 award is given annually to scientists whose work shows exceptional promise for treating lung disease.

Holtzman is a staff physician at Barnes Hospital. Before joining the faculty at Washington University in 1987, he was an assistant professor of medicine and a staff member at the Cardiovascular Research Institute at the University of California, San Francisco. He has lectured internationally and has written numerous scientific papers on his research.

- **Virologist Sondra Schlesinger, Ph.D.,** professor of microbiology and immunology at Washington University School of Medicine in St. Louis, has been honored for her contributions to science by receiving MERIT status for her latest grant.

The five-year grant, totaling more than $800,000, is from the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health (NIH).

Schlesinger's research examines the structure and replication of RNA viruses. Schlesinger and her colleagues hope to determine which viral RNA sequences are required for the regulation of viral replication. It might then be possible to develop very specific antiviral agents that would interfere with, and thus prevent, the interactions that allow disease-causing viruses to grow.

Because Sindbis virus can grow in a wide variety of environments and can enter cells without causing genetic changes, Schlesinger and her associates — **Henry V. Huang, Ph.D.,** and **Charles M. Rice, Ph.D.,** both assistant professors of microbiology and immunology — are now developing it as a means of introducing foreign RNAs into cells in a number of different organisms. Cells infected with Sindbis virus also produce large quantities of proteins and therefore the introduction of foreign RNAs may be useful for producing hormones and growth factors.

Schlesinger has been on the faculty at Washington University since 1964. She received her doctoral degree from the University of Michigan in 1960, and from 1961-64 served as a research associate in biology at Massachusetts Institute of Technology. She has written numerous publications on her research.

- An ophthalmology researcher at Washington University School of Medicine is one of five scientists nationwide to be named a Special Research Scholar by Research to Prevent Blindness (RPB) Inc.

Thomas Ferguson, Ph.D., assistant professor of ophthalmology and pathology, has received the $25,000 *Robert E. McCormick Award*, presented to an outstanding vision scientists whose work shows unusual merit and promise.

Ferguson's research focuses on the effects of light on the eye's immune response. Unlike other parts of the body, the eye does not reject foreign tissue, Ferguson explains. This apparent lack of an immune response can mean important benefits: a prime example is corneal transplants, which are done without special anti-rejection drugs yet have high success rates. On the other hand, when the eye is being attacked by foreign material, it does not defend itself, which can result in loss of vision and even blindness.

Before joining the faculty at Washington University in April, Ferguson was an associate professor of ophthalmology at Emory University School of Medicine in Atlanta. Previously he was a research associate in pathology at the Howard Hughes Medical Institute at Yale. He received a doctorate degree in microbiology/immunology from the University of Cincinnati College of Medicine in 1982.

St. Louis University

■ **Rodrigo Andrade, Ph.D.,** assistant professor of pharmacology at St. Louis University School of Medicine, has been awarded a $335,481 five-year grant from the National Institute of Mental Health and a one-year $24,447 grant from the American Heart Association.

The grants will be used to study the mechanisms and regulation of 5-hydroxytryptamine (5-HT) receptors in the central nervous system and the vasculature. One of the first neurotransmitters to be discovered, 5-HT receptors are found throughout the nervous system and in many blood vessels, where they are known to regulate the function of specific brain cells and also the contraction of blood vessels. Dr. Andrade will study the functions and dynamics of these receptors to better understand the important regulatory roles they play.

A native of Santiago, Chile, Dr. Andrade received his bachelor's degree in biology from Kalamazoo College in Michigan, where he graduated cum laude. He earned his master's degree and doctorate in pharmacology from Yale University. Dr. Andrade is a member of the Society for Neuroscience.

■ **Saadeh Jureidini, M.D.,** assistant professor of pediatric/adolescent medicine, St. Louis University School of Medicine and director of the pediatric catheterization laboratory services for Cardinal Glennon Children's Hospital, has been awarded a patent for his invention of a catheter with a tip manipulation feature.

The catheter is specially designed for a child's cardiovascular system. It is equipped with a pull line, maneuvered by the operator, that will bend the tip of the catheter up to 160 degrees as it travels through atrial, ventricular and arterial passages. This feature is particularly useful in children whose bodies have smaller and more compact passages. The catheter can also be used with select adult patients.

Dr. Jureidini attended Baghdad University School of Medicine and received his pediatric residency training at the American University of Beirut, Lebanon, and the Medical College of Georgia, Atlanta. He is a fellow of the American College of Cardiology. Dr. Jureidini is board certified in pediatrics and pediatric cardiology. The new device will be called Jureidini's Catheter.

■ **William Knight III, M.D.,** professor of internal medicine at St. Louis University School of Medicine, has been awarded two grants totalling $20,000 from Glaxo Inc., to test the effectiveness of a new anti-nausea drug in the treatment of chemotherapy-induced nausea and vomiting.

The first study will evaluate three different dose levels of intravenous Gr-C507/75, an anti-emetic, in the prevention of nausea and vomiting associated with Cisplatin, a chemotherapeutic agent. The second study will compare the Glaxo compound to an industry standard, Reglan, to determine if the new drug is equally or more effective with fewer side effects.

Dr. Knight received his medical degree from St. Louis University School of Medicine in 1973. Prior to returning to the medical center in October 1986, he was an associate professor of medicine in the division of oncology at the University of Texas Health Science Center in San Antonio. Dr. Knight is assisted in his anti-nausea study by **Kathy Merlo, P.A.**

■ **George T. Grossberg, M.D.,** associate professor of psychiatry at St. Louis University School of Medicine and director of the division of geriatric psychiatry at St. Louis University Medical Center, has received a $72,000 grant from Sandoz Pharmaceuticals to study the safety and effectiveness of a new drug in the treatment of Alzheimer's disease. St. Louis University Medical Center is one of ten centers nationwide to conduct a study on the new drug, a high-dose hydergine FAS capsule. Dr. Grossberg has recently been named president-elect of the American Association for Geriatric Psychiatry (AAGP). He will begin his term as president in May 1989. The AAGP was founded by psychiatrists with a special interest in mental health care for the elderly. It facilitates the communication of recent research developments to members and maintains active affiliations with the government and national geriatric organizations.

■ **William E. Rosenfeld, M.D.,** assistant professor of neurology at St. Louis University School of Medicine and director of the Greater Midwest Epilepsy Treatment Center, has been awarded a $118,112 grant from McNeil Pharmaceutical. The grant supports a 17-month clinical study to evaluate use of the drug topiramate in treating epilepsy. The study will involve patients between the ages of 18 and 65 who have poorly controlled partial-simple or partial-complex seizures. The research will determine whether topiramate is an effective anti-epileptic drug, at what dose it may be effective, and if it has toxic complications. Dr. Rosenfeld's co-investigator in the study is **Vincent P. Gibbons, M.D.,** assistant professor of neurology, pediatric division, St. Louis University Medical Center.

■ **William S.M. Wold, Ph.D.,** professor of molecular virology at St. Louis University School of Medicine, will collaborate with **Linda R. Gooding, Ph.D.,** professor of microbiology and immunology at Emory University, in two joint, four-year grants totaling $1.3 million. Awarded by the National Institutes of Health, the grants will allow for the study of the evolved mechanisms of human andenoviruses, which enable them to evade anti-viral defense functions of the immune system. Specifically, they will study how an andenovirus gene product prevents andenovirus-infected cells from being disintegrated by tumor necrosis factor. The tumor necrosis factor is a protein with anti-viral properties that are secreted by cells of the immune system in response to virus infection.

■ **Terry Moore, M.D.,** professor of medicine and director of the division of rheumatology, has received a renewal of a $25,000 grant from the Easter Seal Research Foundation to continue his research on patients with juvenile rheumatoid arthritis (JRA). The research concentrates on the immune complexes in the blood of patients with JRA. Investigating the components of the immune complexes may eventually lead to discovery of a cause of JRA and possible new therapeutic modalities.

University of Missouri-Kansas City

■ **Edmund D. Pellegrino, M.D.,** one of the nation's most distinguished physicians, was the *Noback Visiting Professor* from October 27-29. The visiting professor program was established to provide selected students and faculty members with the opportunity to discuss current issues as well as long-standing values in medicine with outstanding clinicians and medical statesmen. Dr. Pellegrino met with several small groups of students and faculty members, as well as conducting Medical Grand Rounds on the topic, "Values, Logic, and Standards of Clinical Diagnosis."

Dr. Pellegrino is nationally-known as a clinician, investigator, university president, philosopher, and humanist. He currently is director of the Kennedy Institute of Ethics and John Carroll Professor of Medicine and Medical Humanities at Georgetown University. He is the author of 400 papers and the recipient of 33 honorary degrees.

■ The School of Medicine on October 16 held its annual Year-1 convocation, which extends an official welcome to incoming students and their parents. The event traditionally features an illustrious keynote speaker, and this year was no exception for the School of Medicine drew from its own ranks for the speaker. Provost emeritus **E. Grey Dimond, M.D.,** founder of the School, spoke on "How To Thrive and Grow in the Medical School Garden."

■ **Marjorie Sirridge, M.D.,** professor and assistant dean for Curriculum traveled to Milan, Italy, recently, where she presented "Use of the Quantitative Clot Retraction Test in the Study of Families with Thrombasthenia" at the XXII International Congress of Hematology.

■ **George Reisz, M.D.,** docent and associate professor, this summer presented a paper at the Twenty-Third Annual Congress of the European Society of Clinical Respiratory Physicians. Co-authors of the paper, "The Effect of Increasing Theophylline Plasma Concentrations on Diaphragmatic Contracility," were **John Foxworth, Pharm.D., Paul Cuddy, Pharm.D., Dennis Pyszczynski, M.D.,** and **Cathy Emory, Pharm.D.**

■ **Mahmoud S. Ahmed, Ph.D.,** associate professor, made several overseas presentations this summer. "Properties of a Purified Opiate Receptor Protein from Human Placenta" was presented at the International Narcotic Research Conference in Albi, France and he presented "The Placental Opiate System, Physiology and Biochemistry" at the Karolinska Institute in Stockholm, Sweden. In Paris, "Drug Abuse During Pregnancy" was his topic at the Universite' de Paris VI.

■ **Richardson E. Noback, M.D.,** docent and professor, in October presented, "Priorities and Propriety: Social, Economic, Functional and Medical Problems Among the Elderly" at the National Federation of Catholic Physicians annual meeting in Kansas City.

■ Two students recently were presented with awards by the Southern Medical Association. **Manish Naik** and **Jerome Schroeder** each were presented with a $500 scholarship, which goes to students based upon academic merit and financial need.

The University of Missouri-Columbia

■ **Margaret Alberi Flynn, Ph.D.,** professor emeritus of family and community medicine, was honored by the University of Missouri-Columbia Alumni Association at the group's awards banquet in September. Dr. Flynn was awarded the most prestigious faculty honor, the Distinguished Faculty Award. This award, established in 1960, recognizes a faculty member whose sustained efforts in teaching, research and service have added to the excellence of the University. The honor places special emphasis on the faculty member's relationships with students.

Dr. Flynn, who taught at Mizzou from 1966-1986, is noted for her lively lectures and open-door policy with students. Her research includes studies of cholesterol and an 18-year project on aging with 500 University volunteers. Author or co-author of three books, she received an M.S. in 1938 and a Ph.D. in 1966 from the University.

■ **James D. Amerman, Ph.D.,** associate professor of speech pathology, will present his proposal titled "Lineal Compensation in Elderly Adults" at the 1988 American Speech, Language and Hearing Association convention Nov. 17 at the Hynes Convention Center in Boston.

■ **Thomas E. Edes, M.D.,** assistant professor of medicine, has been appointed associate chief of staff for education at Harry S. Truman Memorial Veterans Hospital. In this position, Dr. Edes will be responsible for coordinating educational activities including the medical residency program affiliated with the University of Missouri-Columbia School of Medicine. Dr. Edes earned his medical degree from the University of Illinois, where he also earned a master's degree in nutritional science.

■ **David G. Hall, M.D.,** who was chairman of the Department of Obstetrics and Gynecology from 1962 to December 1987 has retired after 30 years with the University.

■ **Marc W. Haut, Ph.D., Alexander Lising, M.D.,** and **Michael Shutty, Ph.D.,** have joined the Department of Physical Medicine and Rehabilitation. Dr. Haut, who earned his medical degree at the University of North Dakota, will serve as a postdoctoral fellow. Dr. Lising, who earned his M.D. at the University of East Roman in the Philippines and who had been in private practice in Columbia, will work half time in the Spinal Cord Clinic. Dr. Shutty, who earned his Ph.D., at the University of Virginia, will serve as a clinical assistant professor in the Pain Management Center.

■ **Karl D. Nolph, M.D.,** professor of medicine and chief of the division of nephrology, in August served as visiting professor at St. John's Mercy Medical Center in St. Louis. Also in August, he gave the keynote address, on the state of the art in peritoneal dialysis, at a PD seminar for nephrologists in Naples, Fla. In July, Dr. Nolph delivered two presentations on peritoneal dialysis in Japan, one at a Tokyo seminar and the other at the satellite symposium on continuous ambulatory peritoneal dialysis at the 33rd meeting of the Japanese Dialysis and Transplant Society in Nagoya.

■ **Larry L. Penney, M.D.,** and **Julie A. Strickland, M.D.,** have joined the Department of Obstetrics and Gynecology. Dr. Penney, who earned his medical degree at the University of Nebraska, will be an associate professor. His specialty is reproductive endocrinology, and he will be setting up an in vitro fertilization gift program and expanding the department's infertility practice. Dr. Strickland, who received her M.D. from the University of Missouri, will serve as a clinical instructor on a one-year appointment.

■ **John C. Reid, Ph.D.,** professor of educational research and statistics in the biostatistics division; **Javad Kashani, M.D.,** professor of psychiatry; and **Tomas K. Rosenberg,** who recently received his Ph.D. from the University, in August presented a paper, "A Factor Study of the Hopelessness Scale for Children," at the meeting of the American Statistical Association in New Orleans. Their paper showed the insufficiencies of previous analyses of the Hopelessness Scale and suggested techniques for improving the measurement of hopelessness, which has been shown to identify children who might have suicidal tendencies.

■ **Harry White, M.D.,** clinical professor of neurology, has been appointed chief of neurology service at Harry S. Truman Veterans Hospital. Dr. White had been in private practice in Columbia. He earned his M.D. at the University of Kansas and did his residency in neurology at Columbia University-Presbyterian Medical Center in New York City. Dr. White also was in the department of neurology at The Menninger Foundation.

■ **John Yarbro, M.D.,** professor of hematology, has agreed to serve as chairman of the Oncology Care Clinical Indicator Task Force for the Joint Commission on Accreditation of Healthcare Organizations. The task force will help define the scope and depth of indicators for assessing quality of care of oncology patients, which will help healthcare organizations evaluate and improve their patient care services.

■ The following members of the Department of Physical Medicine and Rehabilitation gave poster presentations at the annual joint meeting of the American Academy of Physical Medicine and Rehabilitation Medicine Oct. 31-Nov. 4 in Seattle: **Robert R. Conway, M.D.,** clinical assistant professor; **Daniel Saviers, M.D.,** resident physician; **Roger Thomas, M.D.,** resident physician; **Randall Smith, M.D.,** clinical assistant professor; **Jem Hof, M.D.,** resident physician; **Daniel Sohn, M.D.,** resident physician; **Alexander Lising, M.D.,** clinical assistant professor; **Brenda Guenther, D.O.,** resident physician; and **Kitty Peers,** and **Walter Gerard,** occupational therapists at Rusk Rehabilitation Center.

■ The nation's only rehabilitation research and training center for arthritic diseases funded by the U.S. Department of Education has been established at the University of Missouri-Columbia with a $3 million grant from the department, **Chancellor Haskell Monroe** announced at a news conference Sept. 26.

"This is a big-league accomplishment for this university, particularly the School of Medicine," Chancellor Monroe said.

The five-year grant for the Missouri Arthritis Rehabilitation Research Center, or MARRC, will be funded by the National Institute of Disability and Rehabilitation Research, part of the Education Department's Office of Special Education and Rehabilitative Services.

Several departments within the School of Medicine will collaborate to fulfill the intent of the "center grant," including the Department of Physical Medicine and Rehabilitation, Howard A. Rusk Rehabilitation Center, the division of immunology and rheumatology within the Department of Medicine, the University of Missouri-Columbia Arthritis Center and the Division of orthopedic surgery.

The award is "a recognition that we have a full-service arthritis unit," said **Paul Kaplan, M.D.,** chairman of the PM&R department, medical director of Rusk and co-principal investigator of the grant. **Gordon Sharp, M.D.,** chief of immunology and rheumatology and director of the Arthritis Center, is the grant's other co-principal investigator.

The grant will fund several research projects, including studies of juvenile rheumatoid arthritis, stress and coping with rheumatoid arthritis and the effects of physical exercise and chronic pain in people with arthritis. Work on interactive instructional videodiscs for health professionals and a data base on the incidence of arthritis also will be funded.

Rehabilitation training and dissemination of information are a big part of the MARRC mission, Dr. Sharp said. Through a system of Regional Arthritis Centers already in place across the state, insight gained through MARRC research will be more readily available to the estimated 700,000 Missourians with arthritis, he said.

Studies have shown that many people in the state do not seek treatment for their arthritis until they experience severe chronic pain, Dr. Sharp says. The prevalence of small towns far from medical centers exacerbates the problem. "We hope to focus efforts on underserved areas," he said. ■

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Drs. Sharp and Kaplan

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In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Missouri State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. Please include the title of the article in the transmittal letter.

Manuscripts

Manuscripts should be typewritten, double spaced, and the original with one copy submitted. Retain another copy for proofreading. Please number the pages of your manuscript. Manuscripts are not returned. Hospital and University appointments of the author(s) should accompany the manuscript. A synopsis-abstract of no more than 75 words should accompany the manuscript.

References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

Illustrations

Illustrations should be glossy prints or drawings in India ink on white paper. They should not be mounted and name of author and figure number should be penciled lightly on the back. Legends should appear on a separate sheet.

Legal difficulties may arise from unauthorized use of names, initials or photographs in which individuals can be identified. Permission should be secured from patient or legal guardian and signed duplicate or photostat submitted with such photographs or identification. The Editor and Editorial Board assume no responsibility for the opinions and claims expressed in articles contributed by authors. If citation of an institution related to the article is made, approval of the chief of service should be given in a letter accompanying the article.

Reprints

Reprint order blanks will accompany proof, which will be sent to authors prior to publication.

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Editorials should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the editor, managing editor, and Editorial Board.

Deadline

All material other than scientific should be received prior to the first of the month preceding month of publication.

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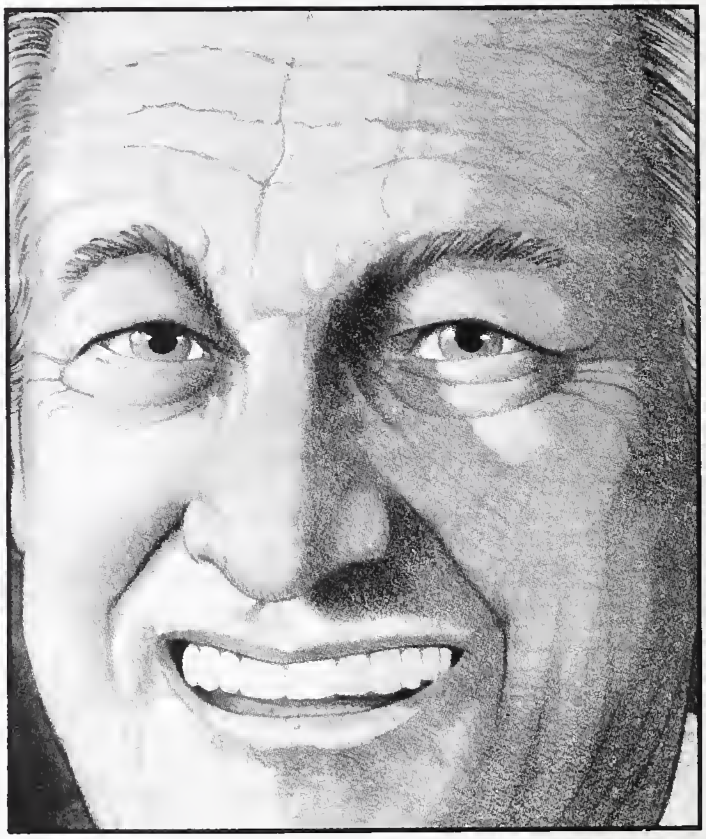

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Physician's Recognition Awards

Fifty MSMA members qualified for the MSMA-AMA Physician's Recognition Award during August and September 1988.

The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

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Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

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OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

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Reference:

1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

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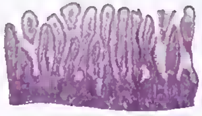
Aspirin and other nonsteroidal anti-inflammatory drugs weaken mucosal defenses, which may lead NSAID users to become prone to duodenal ulcers[1] For those NSAID users who do develop duodenal ulcers, CARAFATE® (sucralfate/Marion) is ideal first-line therapy. Carafate rebuilds mucosal  defenses through a unique, nonsystemic mode of action. Carafate enhances the body's natural healing ability while it protects damaged mucosa from further injury. So the next time you see an arthritis patient with a duodenal ulcer, prescribe nonsystemic Carafate: therapy for the ulcer-prone patient.

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In Memoriam

- **Edmund B. Alvis, M.D.,** died September 15, 1988, at the age of 78. Dr. Alvis, an ophthalmologist, practiced medicine in St. Louis for more than 50 years. He served on the staff at Barnes Hospital for that period of time as well as working with his father in his ophthalmological practice. He retired in 1984. He obtained his medical degree in 1934 at Washington University School of Medicine. Dr. Alvis was a member of the St. Louis Metropolitan Medical Society.

- **Watkins A. Broyles, M.D.,** died August 26, 1988, at the age of 94. Dr. Broyles, a general practitioner, obtained his medical degree in 1924 at the University of Kansas Medical Center. He was a member of the Grand River Medical Society.

- **Donald F. Coburn, M.D.,** died September 15, 1988, at the age of 81. A neurosurgeon, Dr. Coburn obtained his medical degree in 1930 at Washington University School of Medicine. He was a member of the Metropolitan Medical Society of Greater Kansas City.

- **Ernest B. Hanan, M.D.,** died September 2, 1988, at the age of 94. Dr. Hanan, a pathologist, obtained his medical degree in 1929 at the State University of New York School of Medicine at Buffalo. He was a member of the Greene County Medical Society.

- **Shelby B. Hughes, M.D.,** died August 10, 1988, at the age of 85. Dr. Hughes, a general practitioner, obtained his medical degree in 1929 at the St. Louis University School of Medicine. He was a member of the Henry County Medical Society.

- **Thomas R. Moon, Jr., M.D.,** died September 12, 1988, at the age of 55. Dr. Moon, a neurologist, obtained his medical degree in 1959 at the Washington University School of Medicine. He was a member of the St. Louis Metropolitan Medical Society.

- **Albert E. Upsher, M.D.,** died September 11, 1988, at the age of 74. Dr. Upsher, a pathologist, founded Upsher Laboratories, Inc., in 1951. He had also served as director of pathology at Kansas City General Hospital, pathology instructor at the University of Kansas Medical School and head of pathology at the Kansas City Dental College. He obtained his medical degree in 1939 at the Baylor College of Medicine. Dr. Upsher was a member of the Metropolitan Medical Society of Greater Kansas City.

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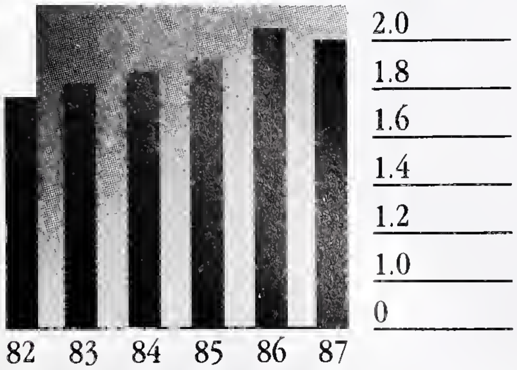

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November

8-11 **TMJ Symposium with Emphasis on Internal Derangements** — Location: Kauai, Hawaii. Contact: University of California, San Francisco 94143-0628. 415/476-5731.

10 **Clinical & Research Advances in Dementia and Hip Fracture** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Office of CME, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6891.

11-13 **Anesthesia and the Geriatric Patient** — Location: Marriott Pavilion Hotel, St. Louis, MO. Contact: Mrs. Peggy Grady, Department of Anesthesiology, Washington University School of Medicine, 660 South Euclid Ave., Box 8054, St. Louis, MO 63110. 314/362-1194.

11-13 **Psychiatry Legal Environment: Medicine's Response** — Location: Hotel DelCoronado, San Diego, CA. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

14 **Biliary Lithotripsy** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

18-19 **Obstetrics Update 1988** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

27-Dec. 2 **74th Scientific Assembly of the Radiological Society of North America** — Location: McCormick Place Convention Center, Chicago. Contact Merle Hedland, Director of Scientific Meetings, Radiological Society of North America, 1415 22nd Street, Tower B, Oak Brook, IL 60521. 312/571-2670.

December

8 **8th Annual Lee T. Ford Cervical, Thoracic & Lumbar Spine Symposium** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Office of CME, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6891.

9-10 **Epilepsy: An Update** — Location: Omni International Hotel, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

12 **MRI in the Clinical Management of Lymphoma** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

1989

January

9 **City-Wide Radiology Conference** — Location: St. Louis University, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

14-19 **Rheumatology for the Primary Care Physician** — Location: Copper Mountain Resort, Colorado. Contact: Loretta Giacoletto, Office of CME, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6891.

19-21 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Eason, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

21-22 **Breast Imaging Update** — Location: San Francisco, CA. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

23-27 **Diagnostic Radiology Seminars** — Location: Ixtapa, Mexico. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

29-Feb. 3 **Aggressive Management of Your Retirement Plan and Valuation of Your Practice** — Location: Virgin Grand Beach Hotel, St. John, Virgin Islands. Contact: James H. McCray, DDS, MAGD, seminar coordinator, Professional Education Society, 231-B Flamingo Road, Mill Valley, CA 94941. 1/800-872-3070.

February

4 **Cardiology Update: Looking Toward the 1990's** — Location: Adam's Mark Hotel, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

13 **MRI in the Pelvis: Staging and Monitoring Response Time in Therapy** — Location: Mallinckrodt Institute of Radiology. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110.

19-24 **Diagnostic Imaging Update** — Location: Park City, Utah. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

23-25 **9th Annual Conference on Peritoneal Dialysis** — Location: Loews Anatole Hotel, Dallas, TX. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

24-27 **Advanced Cardiac Life Support Provider Course** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

March

4-11 **Seventh Winter Congress, Diagnostic Imaging** — Location: Courchevelle, France. Contact: Winter Congress, 21915 Roscoe Blvd., Ste. 222, Canoga Park, CA 91304. 818/700-9821.

5-10 **Magnetic Resonance Imaging Update 1989-Winter Conference** — Location: Snowbird, Utah. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

10-11 **34th Urology Seminar** — Location: Hyatt Regency Hotel, Kansas City, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

10-11 **Family Practice Update** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

31-April 2 **Organizational Systems** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

April

13 **Issues Facing the Diffusion of Medical Technology** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

27-28 **Critical Care Update** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

May

4-6 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Engel, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

4-7 **Psychiatry Legal Environment: Medicine's Response** — Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 **Stereotactic Breast Biopsy** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

12-13 **7th Missouri Clinical Conference on Arthritis** — Location: Holiday Inn Executive Center, Columbia, Mo. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

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One Psychiatrist — needed to complement a team of dynamic psychiatrists and general physicians. Located 65 miles south of St. Louis on Highway 67, our hospital has 318 beds. We are looking for Board Certified or Eligible specialists. Remuneration will range from $67,000 up, depending on years of experience, Board Certification and optional on-call days. Fringe benefits come to an additional 35% of the salary which includes vacation time, sick time, CME allowance, health insurance and life insurance. For detailed information, please write to: Adolph J. Herath, M.D., Medical Director, Farmington State Hospital, Farmington, MO 63640 or call 314/756-6792, extension 347.

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Missouri: Immediate opening for full-time or part-time emergency physician in 120-bed hospital in community of 10,000 in southeast Missouri. 9,000 visits annually. ACLS, ATLS required. Send C.V. to Comprehensive Emergency Care, Inc., P.O. Box 565, Kennett, MO 63857.

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Nevada: Family Practice, Internal Medicine, Pediatrics, OB-GYN, Radiology: Immediate openings in several rural communities; guaranteed salary, full benefits including paid malpractice, and possible University affiliation. No fee to applicant. Contact Sherry Semiatin, Office of Rural Health, Reno, Nevada 89557-0046; 702/784-4841.

Missouri: Emergency Department Physician: Southeast Missouri Hospital, a modern, full-service, 281-bed, JCAH-approved regional medical center and Level II Trauma Center is currently seeking a fifth full-time Emergency Physician. Emergency Department census is greater than 15,000 annually. Our non-profit community hospital has all major medical and surgical sub-specialties represented and is the only major regional referral center between St. Louis and Memphis offering a Regional Heart Program with open heart surgery, obstetrical services, a free standing cancer center, full service pediatrics with intensive care and neonatal units, and a progressive Emergency Department with aeromedical services. A new Emergency Department facility is to be constructed in the near future. Working and living conditions are excellent in this university community of 40,000+, with recreational areas in a close proximity. We seek a candidate committed to a career in Emergency Medicine. Experience in Emergency Medicine is required. We offer a competitive salary and excellent fringe benefits including four weeks vacation and two weeks educational leave. Please send CV to: Director of Personnel, Southeast Missouri Hospital, 1701 Lacey, Cape Girardeau, MO 63701 or phone 314/651-5521.

Seeking a surgeon. ABTS certified/eligible to join a busy practice of cardiovascular surgery, preferably with Pediatric, Transplantation, and Surgical Electrophysiology experience. Recently out of residency training. Send CV to: Kansas Heart Institute, 823 Mulvane, Suite 380, Topeka, Kansas 66606 or call 913/233-1690.

General Internist — Springfield, Missouri; 425,000 medical service population, join 5-physician IM group. Fully-equipped modern clinic, 6 local hospitals; critical care interest beneficial. Competitive salary, benefits. Reply to File #16, C/O *Missouri Medicine*, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

Busy Internist seeks associate. BC/BE candidate will share varied caseload reflecting urban St. Louis neighborhood. Admissions to teaching hospitals with faculty appointment available. Good people skills and sense of humor required. Respond with CV to: File #4444, C/O *Missouri Medicine*, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102.

Indiana: Emergency department directorship opportunity is immediately available in a progressive midwest town located one hour from two major urban centers. Director has the option of straight day shifts, Monday through Friday. No on-call. Good mix of patients from pediatrics to internal medicine. Position requires clinical and administrative experience and ACLS. Annual reimbursement $85,000, occurrence malpractice insurance coverage, health, life, dental and disability insurance, allowance for professional fees and relocation expenses. For additional information, contact Cathy Long, Spectrum Emergency Care, P.O. Box 27352, St. Louis, MO 63141; 1-800-327-3982, extension 3018.

Clinic Physician: Southwest Missouri State University has an immediate opening for a physician in its Health Service Center. The physician will provide primary medical care to students, faculty, staff and dependents (which may include emergency and minor surgical treatment), conduct routine physical examinations and make health appraisals as needed. This position has a salary range of $50,000-$60,000 annually, and is expected to last through the current academic year. M.D. or D.O. degree with a license to practice in Missouri is required. Board Eligible or Board Certified in Family Practice or extensive experience in college health medicine is preferred. Submit a letter of interest, resume, transcripts, and names, addresses, and phone numbers of three current references by November 30, 1988 to: Personnel Office, Southwest Missouri State University, 901 S. National, Springfield, MO 65804. An Equal Opportunity/Affirmative Action Employer.

Positions Available: Neurology. SEI Health Services is seeking two adult neurologists and one pediatric neurologist for a large neurological group in the Southeastern United States. Recruiting board-eligible or board-certified physicians. Competitive salary and comprehensive benefit package that includes malpractice insurance and relocation assistance. Clinical experience in EEG, EMG, envoked response, doppler ultrasound, and sleep disorders preferred. Send resume to: SEI Health Services Division, James Hacker, General Manager, 7725 Little Avenue, Charlotte, NC 28226 or call: 704/542-7100.

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Desirable Medical Office Space available in physician/tenant owned building near hospital. 2156 sq. ft. of finished office area ideal for two-physician practice. Contact: Berrywood Medical Arts Building, 3401 Berrywood, Columbia, MO 65201, or call Building Manager at 314/875-5113, mornings.

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1. Please print or type all information requested and return this form to Valerie A. Peters, Editorial Assistant, MISSOURI MEDICINE, 113 Madison, P.O. Box 1028, Jefferson City, MO 65102. **Deadlines for publication are the first of the month preceding the month of publication.** The deadline is the same for cancellation of a current ad. For example: An ad to run in the November issue should be received by MISSOURI MEDICINE no later than October 1. An ad running in the October issue that the advertiser wants to cancel for November should also be cancelled no later than October 1. **Classified advertising costs:** $25.00 for non-members for the first 50 words or less, then 25¢ per word after that. The cost is $15.00 for members for the same ad, plus 25¢ per word beyond 50 words. File numbers cost an extra $1.25.

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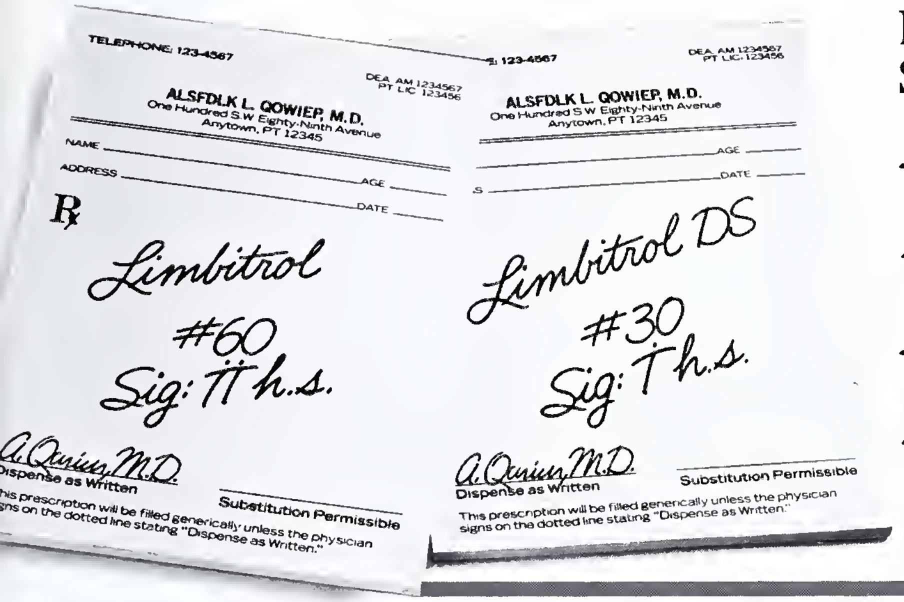

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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

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Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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In the depressed and anxious patient

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- First-week reduction in somatic symptoms[1]

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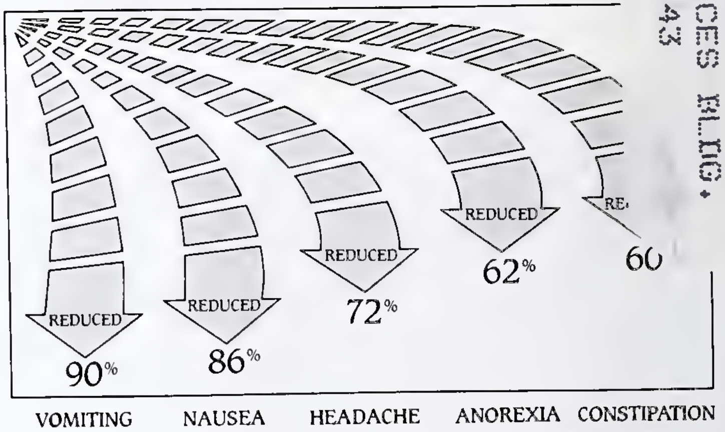

*Patients often presented with more than one somatic symptom.

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Missouri Medicine

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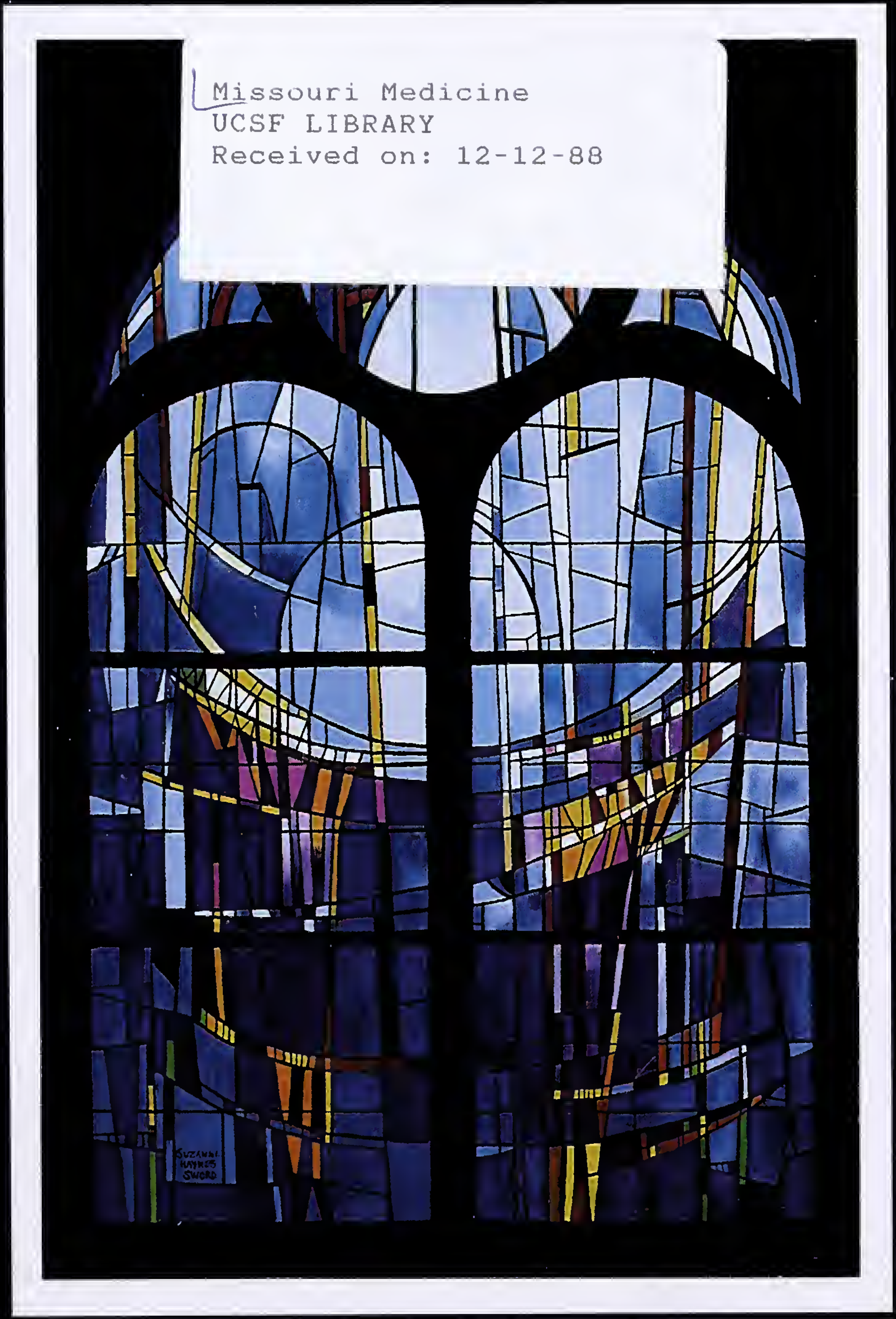
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Founded by the Missouri State Medical Association

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Cover

"Blue Norwegian Glass Window," by Suzanne Haynes Sword, M.D., is one of many oil paintings done by the artist. After several years in Public Health, Dr. Sword, of *Kansas City, MO.*, completed a residency/fellowship in family practice, 1980-85. During that time she pursued oil painting as a hobby.

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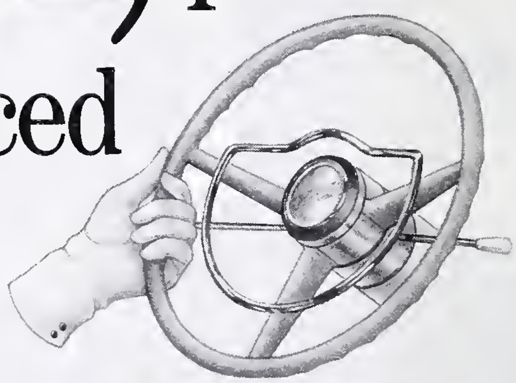

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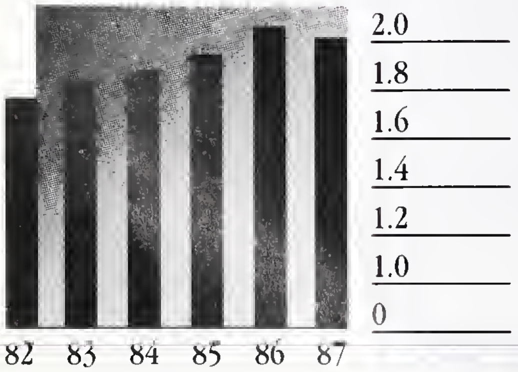

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MSMA Progress Notes

Medical malpractice facts

Medical malpractice experience improved in 1987, with the reporting of a lower number of claims, smaller average indemnity, and a lower loss ratio.

There were 1,920 medical malpractice claims closed in 1987. This was down from the record 2,079 reported closed in 1986; however, it is still 22% more than the 1,571 closed in 1985.

The decline in number of claims affected the hospital and physician claim count proportionately so there was little change in the percentage of claims that fell under each of these categories. Physician claims were 50.7% of all closed claims reported for 1985, 49.8% for 1986 and 48.4% for 1987; hospital claims were 37.7% for 1985, 40.3% for 1986, and 40.6% for 1987. The percentage of claims closed without payment also remained stable over the three-year period: 61.2% for 1985, 67.4% for 1986, and 67.8% for 1987.

The average indemnity paid on medical malpractice claims declined between 1986 and 1987, *falling nearly 22% from $80,802 in 1986 to $63,313 in 1987 for claims closed with payment.* For all closed claims, including those closed without payment, the average indemnity fell 22.7% from *$26,351 in 1986 to $20,379.* The 1985 average indemnity was $63,878 for paid claims and $24,803 for all claims.

Unlike the closed claim count, the average indemnity paid showed different experience for hospital and physician claims. In 1985, the average indemnity for a hospital-generated claim closed with payment was $72,260. In 1986, this figure was $104,913, and in 1987, average indemnity was $53,263. For all hospital-generated closed claims, including those closed without payment, average indemnity for 1985 was $23,557, for 1986 $27,167, and for 1987, $14,749. Physician-generated claims did not have much change with paid claims average indemnity for 1987 being *$82,422, up only .1%* of 1986 average indemnity of *$82,295.* Average indemnity for all claims, including those closed without payment was down about 2%, from *$27,988 in 1986* to *$27,385 in 1987.*

As could be expected from the average indemnity figures given above, the number of "large" claims (those over $100,000) have decreased from 144 in 1986 to 103 in 1987. There were 113 in 1985.

A new dimension has been added to the data shown in several of the tables for 1987. Senate Bill 663, which the legislature passed in 1986, required companies to begin reporting a breakdown between economic and non-economic losses for the amount of indemnity paid. Tables for 1987 which reflect this breakdown can be considered fairly reliable data; however, figures for economic/non-economic indemnity for the years 1985 and 1986 should be ignored because the data are incomplete. It would appear that on an average, economic and non-economic damages for claims closed with payment are virtually the same, *$31,331 for economic and $31,979 for non-economic,* and for all claims $10,084 and $10,293, respectively. Physician-generated claims showed slightly more money was paid out for economic losses ($42,869) than non-economic losses ($39,553) while for hospital-generated claims the opposite is true, with the non-economic damages being slightly higher than the economic ($28,685 and $24,629, respectively). It should be pointed out that these percentages may change as claims opened after the law became effective mature.

The table, "Claim Dispositions," shows a higher percentage of the claims are being subjected to court jurisdiction. In 1985, *21.1% of all* claims closed in that year had been taken to court; in 1986 this figure was *27%*, and in 1987, *41.5%*. The average indemnity on claims disposed after going to court was higher than those settled, whether for the plaintiff or for all claims. "All Claims" are the total claims closed for the year whether for the plaintiff or for the defendant. Below are shown the comparisons:

	In Favor of Plaintiff		*All Claims*	
	Court	*No Court*	*Court*	*No Court*
1985	$124,319	$43,994	$53,543	$16,298
1986	$148,920	$50,656	$55,215	$15,684
1987	$ 95,018	$42,768	$29,006	$14,269

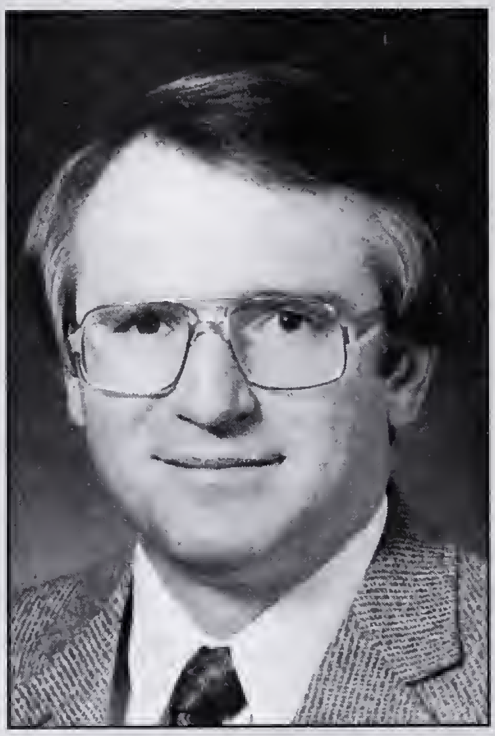
As was reported last year, self insurers are now required to report their medical malpractice insurance experience. In 1987, 21 self-insurers reported 150 claims closed, 30 of those with payment. This compares to 769 closed claims being reported by assessable mutual companies and 1,001 by traditional insurers. Closed with payment for assessables were 240 claims and for traditional insurers 348.

Information for this malpractice report comes from two sources: claims data submitted on individual claim forms to the Division, and Supplement to Page 14 of the Annual Statement submitted by each insurer. Premium and loss data are shown in Table XII, with data being shown for total experience, physicians and surgeons, hospitals, dentists, nurses, and others. True loss ratios (losses incurred/premium earned) for medical malpractice experience in 1987 showed marked improvement over previous years. The loss ratio for the total malpractice business was *75.31%*, based on premiums earned of $92,404,278 and losses incurred of $69,587,141. In 1986 and 1985, loss ratios were *97.76%* and *122.80%*, respectively. The 1987 premium earned was 1.6% lower than the 1986 premium earned of $93,950,328, but still considerably higher than the 1985 figure of $58,127,177. Losses incurred were down from both years. Losses incurred were $91,841,912 for 1986 and $71,382,689 for 1985.

The number of companies writing medical malpractice coverage grows smaller each year. In 1985, 57 companies reported writing some premium in the state, in 1986, 46 companies and in 1987, 43 companies reported premium written in Missouri. Total premium written in Missouri in 1987 was $100,321,984.

As required by Senate Bill 633, now part of Chapter 383, RSMo 1986, the Division has begun collecting open claims data. All companies are required to report claims as they are opened. One thousand six hundred ninety-three claims were reported opened in 1987: 258 by self-insurers, 557 by assessable mutual companies, 866 by traditional companies, and 12 by a Missouri risk retention group. Studies are being made to determine how this open claims data can be made a part of future Missouri medical malpractice reports. ■

Larry G. Piepergerdes, M.D. dies



MSMA Immediate Past President Larry G. Piepergerdes, M.D. died unexpectedly November 4.

The 51-year-old ophthalmologist was born in St. Joseph, MO and raised near Stewartsville, MO. Dr. Piepergerdes received an associate's degree from Graceland College, Lamoni, Iowa and a bachelor's degree from Iowa State University, Ames, in 1959. He received his doctoral degree from the University of Missouri-Columbia School of Medicine in 1964 and a master's degree in ophthalmology from the University of Iowa, Iowa City, in 1967. Dr. Piepergerdes served in the Army Medical Corps from 1965 to 1967.

As assistant professor of ophthalmology at the University of Missouri from 1971-1972, Dr. Piepergerdes moved to Kansas City in 1972 where he practiced ophthalmology in that city and Lee's Summit. He served on the staffs of the Independence Regional Health Center, the Medical Center of Independence, the Lee's Summit Community Hospital and Research Medical Center. He was a member and Missouri delegate to the American Medical Association, a diplomate of the American Board of Ophthalmology and a fellow of the American College of Surgeons. He was vice president of the Medical School Foundation Board of the University of Missouri-Columbia School of Medicine.

In addition, Dr. Piepergerdes was active in the Lee's Summit Chamber of Commerce, the Independence Rotary Club, Ducks Unlimited and Quail Unlimited.

Survivors include his wife, Margaret, and his children Grant, Amy and Anne, all of the home.

Memorial contributions are suggested to the UMC Medical School Foundation, MA215 Health Sciences Center, Columbia, MO 65212 or to the UMC School of Veterinary Medicine, c/o Dr. Kenneth Neimeyer, Associate Dean for Academic and Alumni Affairs, College of Veterinary Medicine, Columbia, MO 65211. ■

MSMA opposes "smokeless cigarettes"

The Missouri State Medical Association asked the Missouri Department of Health to declare R.J. Reynolds' nicotine product, "Premier," to be a drug and halt its distribution in the state. The request came in the form of a legal petition co-signed by representatives of the American Medical Association, the Missouri State Medical Association, and the St. Louis Metropolitan Medical Society.

Billed as a "smokeless cigarette" by its manufacturer, Premier is now being test-marketed, without Health Department approval, in St.

Louis and the state of Arizona. A similar petition was also filed in that state.

The medical groups' petition asserts that the product fits the definition of a drug-delivery system, not a cigarette, and thus violates state and federal law by being marketed without the necessary approval of the Federal Food and Drug Administration and state health officials.

The petition states that Premier is a new and hazardous system intended to deliver the drug nicotine, "a psychoactive and addictive drug which has been implicated in cardiovascular disease, complications of hypertension, reproductive disorders, cancer and gastrointestinal disorders." Further, R.J. Reynolds claims Premier is a "safer" way to smoke, although users will still receive significant amounts of carbon monoxide and nicotine, both of which are dangerous.

In April, 1988, the AMA filed a citizen petition with the FDA, requesting the agency to assert jurisdiction over, and regulate as a drug, the new nicotine delivery system developed by R.J. Reynolds. The FDA is currently reviewing the petition.

However, R.J. Reynolds, without waiting for marketing clearance, began selling Premier in St. Louis on October 1, 1988. The MSMA believes that before this product is put on the general market, the Department of Health and other regulatory agencies should responsibly evaluate whether the dangerous health effects of the product should preclude its sale in Missouri and the rest of the country. ■

SMA elects Mell

Roger L. Mell, M.D., orthopaedic surgeon from Chesterfield, was elected President of the Southern Medical Association during the First General Session of the Association at its 82nd Annual Scientific Assembly held in New Orleans in November.

The Southern Medical Association is a voluntary association of physicians with a membership of more than 50,000 throughout its territory of 16 southern states and the District of Columbia. The prime purpose of the organization is to foster the art and science of medicine. ■

PRO nominations

William Cottingham, D.O.'s term as the Area II representative on the Missouri Patient Care Review Foundation's Board of Directors expires on January 31, 1989. MSMA asks that nominations and a curriculum vitae on nominees be sent to the MSMA office by December 20. Area II is composed of Mid-Missouri counties. If you need a copy of Bylaws Amendment #1 outlining the election process, please contact the MSMA office at 314/636-5151. ■

MMPAC works!

Here is a breakdown of MMPAC contribution results from the last primary and general elections that shows:

- MMPAC supported the U.S. Senate winner
- MMPAC supported the nine Congressional winners, plus one loser
- MMPAC gave support to both governor candidates, but more to the winner
- In the Missouri Senate, MMPAC was 16-for-16, including three hotly-contested races.
- In the Missouri House, MMPAC supported a total of 164 candidates in either the primary or general election. Of those, 158 won.

Support MMPAC when paying your 1989 MSMA dues. ■

Physicians and Medicare

"Under the revised procedures, when considering limitation of liability for you at the time of the initial determination, Medicare generally will treat you as if you knew, or could reasonably have expected to know, that Medicare would not pay for the denied items and services. Of course, if you did not know and could not have been expected to know that Medicare would not pay, or, in fact, did notify the patient that Medicare likely would not pay, you may request the carrier to perform a review of its initial determination."

Got that straight? How many times did you have to read that paragraph to comprehend what it means? If you understood it the first time through, then you are ready for the Medicare program and all of its changes that have been implemented in the past half year or so. Medicare has changed much in the past several months, and most physicians would agree that it is at times confusing to understand the changes. After reading the first paragraph, which is an excerpt from a letter sent by the Department of Health and Human Services, you probably would agree. ■

Medicare Part B study

The Physician Payment Review Commission, an advisory body to the U.S. Congress, was created in 1986 to make recommendations to reform Part B of Medicare. The Commission is conducting a survey of physicians to obtain data to be used in the preparation of the March 1989 report to Congress.

The main purpose of the survey is to obtain data unavailable from other studies on practice costs, Medicare assignment patterns, the use of certain diagnostic services, and the allocation of physicians' time. The data will be used to develop recommendations on Medicare reimbursement and other issues.

Westat, Inc., will contact a random sample of approximately 6,000 physicians and request their participation in the study. Physicians who respond will have the option of mailing back the completed survey or providing information over the telephone to trained interviewers. Confidentiality will be strictly protected. Participating physicians will receive a copy of the study report if they so indicate. If you have any questions regarding the study, please contact the PPRC Project Officer, Herschel Goldfield at 202/653-7720. ■

MSMA office renovation begins

The process of renovating MSMA headquarters at 113 and 115 Madison in Jefferson City has begun. Presently, B.D. Simon is busy tearing out the old walls and ceilings in the building at 115 Madison. The workers have been busy clearing the way for the rebuilding to begin. The top photo shows the back room on the second floor, where the wall beams that separated the room from the front part of the house can be seen. The mantles from the fireplaces have been removed and are being stored at 113 Madison. They will be replaced after the remodeling begins.

The bottom photo shows the staircase that leads from the second floor to the third floor. The wall and ceiling beams are all that are left in the rooms surrounding the staircase.

Each month we will publish pictures of the buildings as they undergo their "makeover." It should be an interesting pictorial. ■

AIDS statistics

As of October 28, 1988, there were 76,670 cases of AIDS reported in the United States. There were 43,027 reported AIDS deaths. In Missouri, there were 763 cases reported and 399 deaths. These statistics are provided through the Missouri Department of Health Bureau of AIDS Prevention.

Kansas City has the most dramatic increase of reported cases of AIDS. From 1982-1987, there were 165 reported cases and 102 deaths. In 1988 alone, there have been 144 reported cases and 24 deaths. In St. Louis in 1988, there have been 89 reported cases and 42 deaths. ■

ACP makes recommendation

The American College of Physicians (ACP) recently recommended medically supervised physical exercise for certain patients recovering from heart attacks or heart surgery. The recommendation identifies patients at low, intermediate and high risk for future cardiac problems, and suggests appropriate levels of rehabilitation for each category. ECG monitoring and intensive supervision during exercise are recommended for high-risk patients. Formal rehabilitation programs were found to be unnecessary for most patients who suffered uncomplicated heart attacks, according to ACP. Cardiac rehabilitation should be tailored to each patient's needs, with the use of teaching, counseling and exercise programs determined on an individual basis by physicians, ACP says. The recommendation was published October 15 in *Annals of Internal Medicine.* ■

New AMA publication

In an effort to assist practicing physicians in understanding the federal requirement calling for physicians to provide refunds to Medicare patients for services which carriers deem to be "medically unnecessary," the AMA has published a new book, *Medicare Carrier Review: What Every Physician Should Know About "Medically Unnecessary" Denials.* The book was written by AMA staff with technical assistance from officials of HCFA, to give physicians and their billing staff a clearer understanding of the entire review process.

The book is being sold through AMA Order Processing for $10.00 to members and $12.50 to non-members. ■

Medical Misconduct

J. Michael Conoyer, M.D.
St. Peters, Missouri

As president of the Missouri Board of Registration for the Healing Arts, I am asked questions regarding what constitutes misconduct. Let me state at the outset that what I have to say involves solely my personal opinion and not the opinion of any other person, nor the official opinion of the Missouri Board of Registration for the Healing Arts.

Black's Law Dictionary defines misconduct as "a transgression of some established and definite rule of action, a forbidden act, a dereliction from duty, unlawful behavior — willful in character, improper or wrong behavior; its synonyms are misdemeanor, misdeed, misbehavior, delinquency, impropriety, mismanagement, offense, but not negligence or carelessness."

There are many federal and state statutes, rules and regulations which act as a guide to a physician's professional conduct. Chief among these is the Medical Practice Act which applies to Missouri physicians. Section 334.100 RSMo details the causes that may be cited by the Board of Healing Arts before the Administrative Hearing Commission in the discipline of a physician's license. Any of the acts defined in Missouri's statute would certainly be misconduct, but the Missouri statute goes beyond the Black's Law Dictionary definition of misconduct and addresses negligence and certain types of personal behavior which are specific causes for disciplinary action. The most common causes for which the Board of Healing Arts has historically taken action include the misuse, abuse and diversion of prescription drugs, felony criminal convictions, disciplinary actions in other states, sexual relationships with patients, and fraud. In my opinion, these activities speak for themselves as acts of misconduct by a physician.

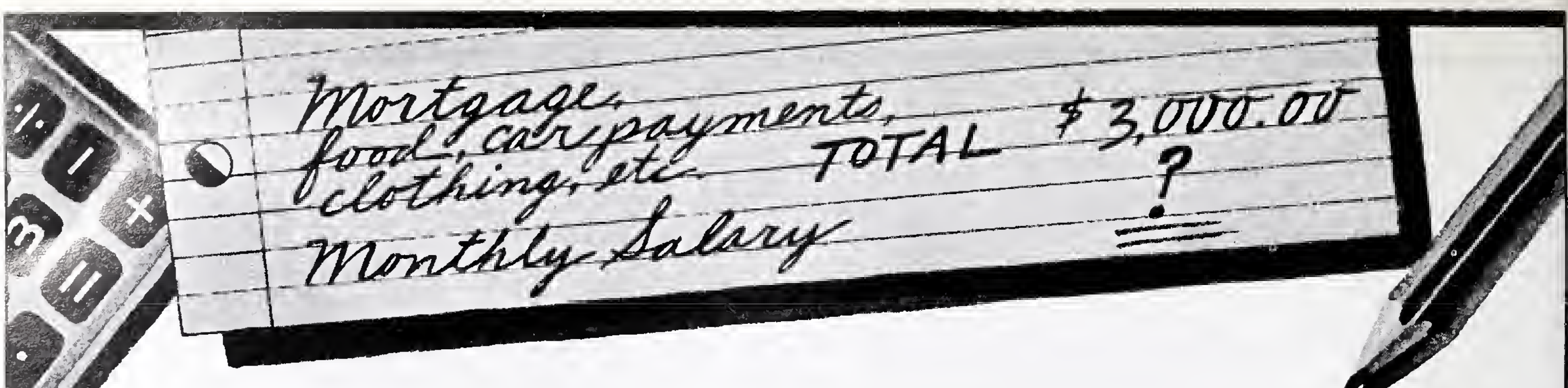
In 1987, the Missouri General Assembly passed House Bill 667 which has given the State a new Medical Practice Act with more complete definition. This act delineates many specific offenses but also allows the Board of Healing Arts some interpretation as to what constitutes misconduct.

In light of this new range of interpretation, some areas of concern in today's medical environment would include peer review, expert testimony in professional liability cases and other tort testimony, and the setting of physician employment.

Specifically, would a person who testifies falsely in a professional liability trial or in a workmen's compensation case be guilty of misconduct? Also, would a physician purporting to be a medical expert in a specific area without the necessary training or experience be guilty of misconduct? Would an employed anesthesiologist anesthetize a patient with the knowledge that his employer had not provided him with the proper monitors, anesthesia equipment and crash cart? Would a physician accept a third party payor contract if it inherently placed him in a position of reducing quality to assure personal profit? Would a physician involved in peer review deny patients access to care and physicians access to payment based on criteria which he knows may cause patients to suffer?

I have my opinion on the answers to these questions, as I am sure each of you do. Suffice it to say that as the scope of peer review through the Board of Healing Arts and other regulatory agencies increases, and as the scope of medical practice changes, there will be much debate as to what constitutes misconduct. Ultimately, the courts will decide.

I should think, however, that the physician who espouses the patient's best interest and the truth in his honest opinion, would be an unlikely candidate to commit an act of professional misconduct or to be adjudicated of having done so. ■



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EDITOR'S DESK

by Donald G. Sessions, M.D.
Editor

Sometimes as I drive by an accident on the highway I talk myself out of stopping. . . . This time there was no doubt about stopping.

Accident report

I left the hospital early that day and drove toward the interstate highway. I turned right onto the highway and accelerated smoothly into the first lane. A light brown car was ahead of me in the lane. I checked behind me and went easily into the second lane. My left turn signal was still on and I was preparing to move into the third lane when I noticed a white car already in that lane about to pass me on the left so I slowed to let it go by.

The white car passed me and quickly signaled to go right into the lane in front of me. As it started to do this the brown car in lane number one signaled with one flash and immediately moved left into lane two. The brown car was going much slower than the white car but it was suddenly positioned in the right half of lane two. Both these cars were about 50 yards ahead of me.

The white car veered sharply to the left to avoid impact with the brown car. This was followed by a sharp compensatory turn back to the right, and then by an even sharper turn to the left again. This took the white car directly into the center median concrete at a 90° angle. The car seemed to explode as it hit the concrete, bounced forward, and turned over. To me, this appeared to happen in slow motion, as if I were watching it in a movie or on television. As I drove by the white car I saw that it was on its roof and there was a limp dummy-like body with its head and shoulders protruding face down out of the blown-out back window.

Sometimes as I drive by an accident on the highway I talk myself out of stopping. Usually there are many people around to help and I figure that things are under control. This time there was no doubt about stopping. I remember thinking to myself that I was going to miss saying good-by to my son who was going on a trip that afternoon. I pulled over onto the shoulder, parked, and prepared to pronounce the victim dead. I was the second person on the scene. A man in a car going the other way had stopped and had jumped the concrete median and was kneeling in the glass near the body. He was holding some paper towels on the crash victim's face. Miraculously the young woman was alive. She was still face down, half in and half out of the back window of her overturned car. She was groggy but conscious and was able to move all her extremities. The paper towels were being held over an obvious laceration on the left side of her mandible. At this point, on her own, she moved herself back into the car proper. Neither of the car doors could be opened to get her out. One of several young policemen now on the scene suggested that we break the side window to get her out. "That's what we need," I thought, "to shower her with more glass." Before this could be done, she crawled and we pulled her out through the shattered back window. There was broken glass everywhere. We got a floor mat from near the victim, and a large piece of cardboard and helped her out from under the car.

We lay her down on a red blanket. I checked her briefly. She told me her first name. She was in no respiratory distress and had a good solid pulse which was fast. At this point her eyes rolled back and she passed out. "Great," I thought,

Continued on page 814

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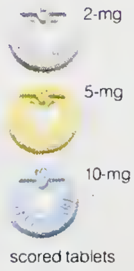
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by Janice K. Woerth, Ph.D.

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Or call her direct:
816/587-1125

Although your name will ***not*** *be used in the journal, please include your name and phone number so that Dr. Woerth may contact you if she needs additional information to answer your question.*

Staff tardiness

Dear Dr. Woerth,

I have an employee who is perpetually late to work in the morning and in returning from lunch. Yet, in every other aspect, she is a good employee. How should I handle this problem?

Dr. M.N.

Dear Dr. M.N.,

I recommend that you schedule a brief and private meeting with the employee to discuss this problem of tardiness. Rather than tell the employee what you want, (punctuality in arriving to work) get the employee to "own the problem." For example try approaching the problem like this, "Mary, what are we going to do about your constantly being late?" Let her help decide the solution. When a solution is agreed upon by both you and the employee, two things should be done. First, have the problem and the agreed-upon solution typed and signed by you and the employee. This establishes documentation should the problem persist and disciplinary action need to be taken. It also lets the employee know that you are very serious about eliminating this problem. Second, set a date and time to reconvene to evaluate the employee's improvement (about two weeks to a month).

During this evaluation period, have "Mary" keep a record of her arrival time to work and when she leaves for and returns from lunch. At the end of the evaluation period, use Mary's records to assess her punctuality.

Generally, I find that by bringing an employee's tardiness to his/her attention and working with him/her to eliminate it, the problem is solved. If the problem does persist you and the employee may wish to decide on more serious action to tardiness like docking pay.

Efficient coding

Dear Dr. Woerth,

I am a medical partner in a specialty practice (radiology). The insurance clerk codes our procedures from the radiology section of CPT, codes 70000-79999. Sometimes the clerk needs to code services/procedures located in other sections of the CPT book. Can a specialist use CPT codes in other sections of the book?

Dr. C.R.

Dear Dr. C.R.,

According to the instructions for use of CPT "any procedure or service in any section of this [sic] book may be used to designate the services rendered by any qualified physician." Thus, if you need to use codes in the Medicine or Surgery sections for example, it is perfectly appropriate to do so. I would suggest that your insurance clerk be familiar with the correct definition of terms (see pages xiv-xviii in the 1988 CPT) and read all guidelines and notes located in the sections of CPT from which he/she is coding. This will help ensure correct use of the codes. ■

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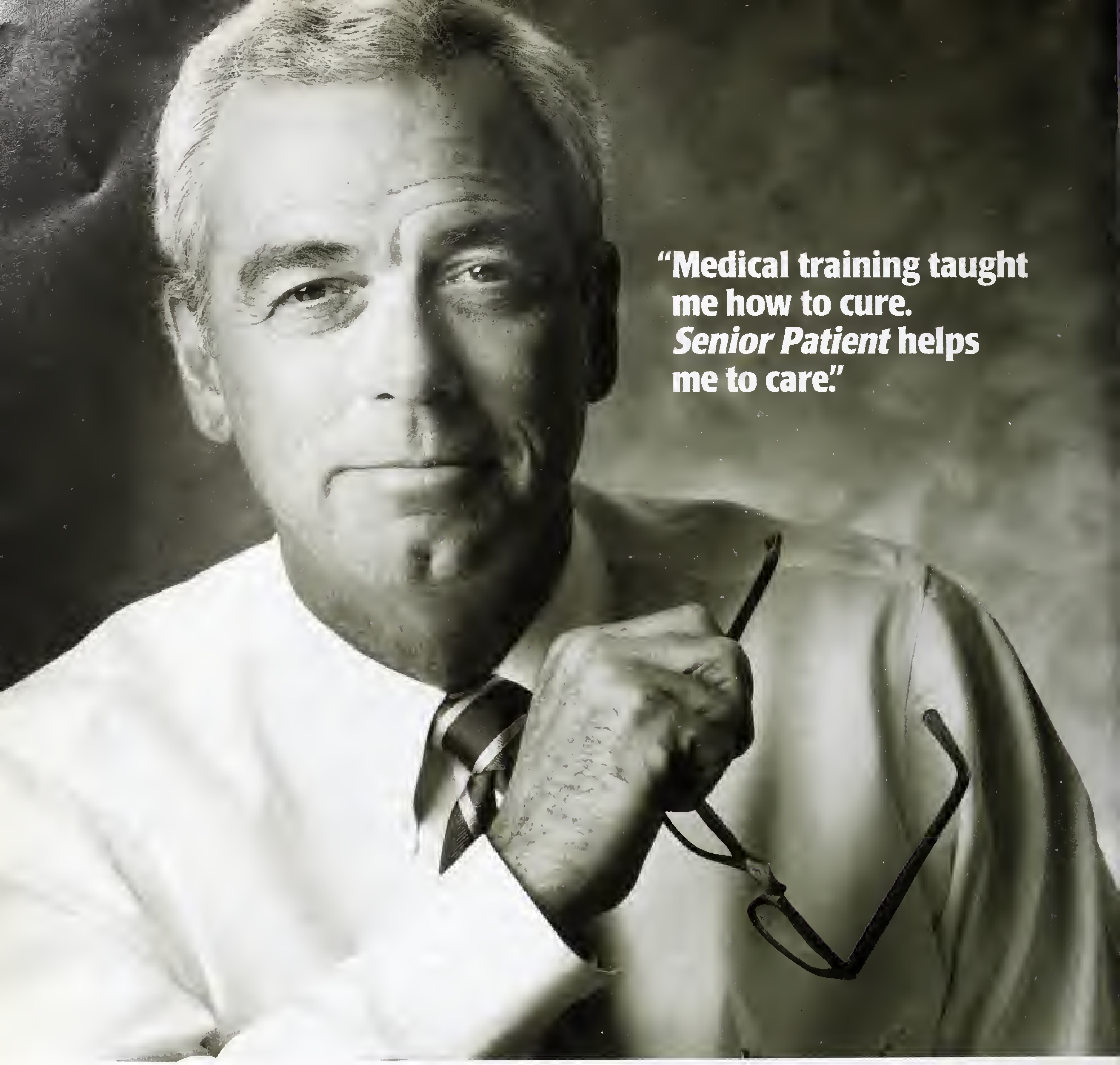
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BRIEF SUMMARY
CONSULT PACKAGE INSERT FOR FULL PRESCRIBING INFORMATION

INDICATIONS AND USAGE

Cipro® is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below

Lower Respiratory Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Pseudomonas aeruginosa, Haemophilus influenzae, Haemophilus parainfluenzae,* and *Streptococcus pneumoniae.*

Skin and Skin Structure Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella morganii, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis,* and *Streptococcus pyogenes*

Bone and Joint Infections caused by *Enterobacter cloacae, Serratia marcescens,* and *Pseudomonas aeruginosa*

Urinary Tract Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus mirabilis, Providencia rettgeri, Morganella morganii, Citrobacter diversus, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus epidermidis,* and *Streptococcus faecalis*

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri,** and *Shigella sonnei** when antibacterial therapy is indicated

*Efficacy for this organism in this organ system was studied in fewer than 10 infections

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin Therapy with Cipro® may be initiated before results of these tests are known, once results become available appropriate therapy should be continued As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN, ADOLESCENTS, OR PREGNANT WOMEN The oral administration of ciprofloxacin caused lameness in immature dogs Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

PRECAUTIONS

General: As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Quinolones may also cause anaphylactic reactions and cardiovascular collapse. Anaphylactic reactions may require epinephrine and other emergency measures

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

Drug Interactions: Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life This may result in increased risk of theophylline-related adverse reactions If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired, concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms Repeated evaluation of the patient's condition and microbial susceptibility testing is essential If superinfection occurs during therapy, appropriate measures should be taken

Information for Patients: Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing Ciprofloxacin may cause dizziness or lightheadedness therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination

Carcinogenesis, Mutagenesis, Impairment of Fertility: Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below

Salmonella/Microsome Test (Negative)
E coli DNA Repair Assay (Negative)
Mouse Lymphoma Cell Forward Mutation Assay (Positive)
Chinese Hamster V_{79} Cell HGPRT Test (Negative)
Syrian Hamster Embryo Cell Transformation Assay (Negative)
Saccharomyces cerevisiae Point Mutation Assay (Negative)
Saccharomyces cerevisiae Mitotic Crossover and Gene Conversion Assay (Negative)
Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results.

Rat Hepatocyte DNA Repair Assay
Micronucleus Test (Mice)
Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed

Pregnancy – Pregnancy Category C: Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

CONVENIENT *B.I.D.* DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
Respiratory Tract* Bone and Joint* Skin/Skin Structure*	Mild/Moderate	500 mg q12h
	Severe/Complicated	750 mg q12h
Urinary Tract*	Mild/Moderate	250 mg q12h
	Severe/Complicated	500 mg q12h
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg q12h

Nursing Mothers: It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother

Pediatric Use: Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS).

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated During clinical investigation, 2,799 patients received 2,868 courses of the drug Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0% Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below Those typical of quinolones are italicized

GASTROINTESTINAL *(See above)*, painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding.

CENTRAL NERVOUS SYSTEM. *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia*

SKIN/HYPERSENSITIVITY *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum

Allergic reactions ranging from urticaria to anaphylactic reactions have been reported

SPECIAL SENSES *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste*

MUSCULOSKELETAL *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout

RENAL/UROGENITAL *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis

CARDIOVASCULAR. palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism.

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship

Hepatic – Elevations of ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%).

Hematologic – eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).

Renal – Elevations of: Serum creatinine (1.1%), BUN (0.9%).

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED

Other changes occurring in less than 0.1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis

OVERDOSAGE

Information on overdosage in humans is not available In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage The patient should be carefully observed and given supportive treatment Adequate hydration must be maintained In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours

The recommended dosage for infectious diarrhea is 500 mg every 12 hours

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

***Due to susceptible strains of indicated pathogens.**
See indicated organisms in Prescribing Information.

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Special Article

H_2 Receptor Antagonist Usage in Missouri Medicaid Recipients

Kaaren C. Douglas, M.D., MSPH, A. Michael Dykstra, D.O., William Fitzpatrick, P.D., Lon Lowrey, R.Ph., Theresa R. Prosser, Pharm.D., David R. Rush, Pharm.D., and W. Jack Stelmach, M.D.
Missouri Division of Medical Services Drug Utilization Review Committee

One of the persistent problems of providing service to disadvantaged individuals is delivering care to as many people as possible within a limited budget. In addition, when government is providing the service, it has a responsibility to monitor its delivery and ensure appropriateness and quality.

The Missouri Department of Social Services Division of Medical Services is charged with providing service to the state's Medicaid recipients. The provision of outpatient medication through the Missouri Medicaid Formulary is one of those services. In keeping with a need to monitor patterns of drug use by Medicaid recipients, the Drug Utilization Review (DUR) Committee of physicians, pharmacists and other professionals has been formed. The committee's function is primarily evaluative and educational. We have been charged with observing drug use, evaluating cost factors, establishing guidelines for drug use, and educating practitioners in Missouri about our findings.

One of the first areas that our committee has looked at is the Missouri formulary-approved Histamine$_2$ receptor antagonist class: cimetidine (Tagamet®), ranitidine (Zantac®), and famotidine (Pepcid®). In September we sent a newsletter *(Missouri DUReport)* to Missouri Medicaid providers with information about the use of these drugs in Missouri. The H_2 receptor antagonists consume nearly 10% of the total dollars reimbursed for *all* Medicaid formulary drugs each month. Alone, these three drugs are now being reimbursed at more than $500,000.00 per *month* for Missouri Medicaid recipients.

In our review of the use of these agents, we found that many Medicaid recipients are on therapeutic dose regimens for periods that exceed package labeling and recommended guidelines, and many for unapproved conditions, or in the absence of a diagnostic indication.[1] In addition, the use of these drugs by the institutionalized elderly appears to be grossly out of proportion to the likely prevalence of peptic disease in this population. For example, only 5% to 10% of Americans develop true peptic ulcer disease during their lifetime. If the 22,652 Medicaid recipients living in nursing homes are similar to the general population, then only 5% to 10% of them, or a maximum of 2265 people would have true peptic ulcer disease. Since an average of 10,000 prescriptions are filled each month for this class of drugs, and the institutionalized elderly consume 50% of the total dollar outlay, then about 5000 individuals in nursing homes are being given an H_2 receptor antagonist each month.

Editor's note: *The findings and views included in this report are those of the committee and not necessarily those held by the Department of Social Services.*

We must ask ourselves some serious questions about our drug prescribing. Is the incidence of peptic ulcer disease more than twice as high in the elderly compared to the general population? Are these drugs efficacious for relieving pain and preventing complications in peptic ulcer disease and other dyspeptic syndromes? Are there risks associated with long-term therapy with H_2 receptor antagonists?

The incidence of peptic ulcer disease remains about the same from age 20 to age 70, while the ratio of duodenal to gastric ulcer decreases from 10:1 to 2:1, and the ratio of males to females drops from 11:1 to 5:1.[2] In a study of 300 outpatients above the age of 65, 7% of the group had duodenal ulcer, and 3% had gastric ulcer, while 56% had functional GI distress.[3] In answer to our first question, the incidence of peptic disease in the elderly does **not** appear to be twice that of the general population.

The efficacy of medical treatment of peptic ulcer disease has not been demonstrated. While the use of H_2 receptor antagonists has shown an increase in rate of ulcer healing, no studies have shown H_2 receptor antagonists relieve pain and prevent complications.[4] Dyspepsia, not related to peptic disease, is a common complaint, and although not an approved indication for the use of H_2 receptor antagonists, these drugs are frequently given for these complaints. No clear benefit has been shown in studies designed to demonstrate efficacy of these drugs for nonulcer dyspepsia.[5] The answer to our second question is also *no*. Efficacy has **not** been demonstrated in peptic ulcer disease and other dyspeptic syndromes.

Direct risks of treatment with H_2 receptor antagonists remain fairly insignificant, however, certain factors must be taken into consideration. Potential drug interactions are well documented and occur at relatively low levels. In the elderly, however, H_2 receptor antagonists can produce a change in mental status.[6] Delirium from these drugs may be dismissed as dementia, thereby presenting a risk for institutionalization or the need for increased levels of care in a long term care setting. Gastric phytobezoar formation, especially after prolonged therapy, may be a risk in elderly patients. H_2 receptor antagonists may contribute to bezoar formation by reducing acid secretion and delaying gastric emptying.[7]

No one knows what the effect of a prolonged hypochlorhydric state will have over time. It may contribute to hypergastrinemia or carcinoid tumors. Gastric bacterial overgrowth has been demonstrated after a month's course of therapy, especially overgrowth of enteric microflora.[8] There is a higher incidence of colonization with gram negative bacilli in ventilator patients receiving antacids and prophylactic H_2 blocker therapy.[9] The conclusion we reach on our third question is that the benefits of prolonged therapy probably do not outweigh the risks, especially in elderly patients.

One solution to the problem of prolonged or inappropriate use of these drugs is to assure that guidelines for use are available for practitioners to follow. These guidelines might include:

1. Limit full dose therapy to 4 to 8 weeks, and consider single bedtime or late afternoon dosing regimens which have the same healing rates and may have fewer side effects.
2. Limit outpatient prescriptions to 1 or 2 refills, and limit nursing home orders to 8 weeks only to assure proper follow-up with the physician and to eliminate potential abuse or unnecessary refills.
3. Adjust dosing downward for patients with impaired renal function (Creatinine clearance <30ml/min/1.73m^2).
4. Use only bedtime or late afternoon dosing for prophylactic regimens, unless a hypersecretory diagnosis has been confirmed, and avoid concurrent use of different H_2 antagonists.

By scrutinizing our prescribing habits, we may maximize the finite resources available for the Medicaid program to better serve a growing population and allow the availability of new drugs that may improve our ability to deliver care. We appreciate your support in our efforts.

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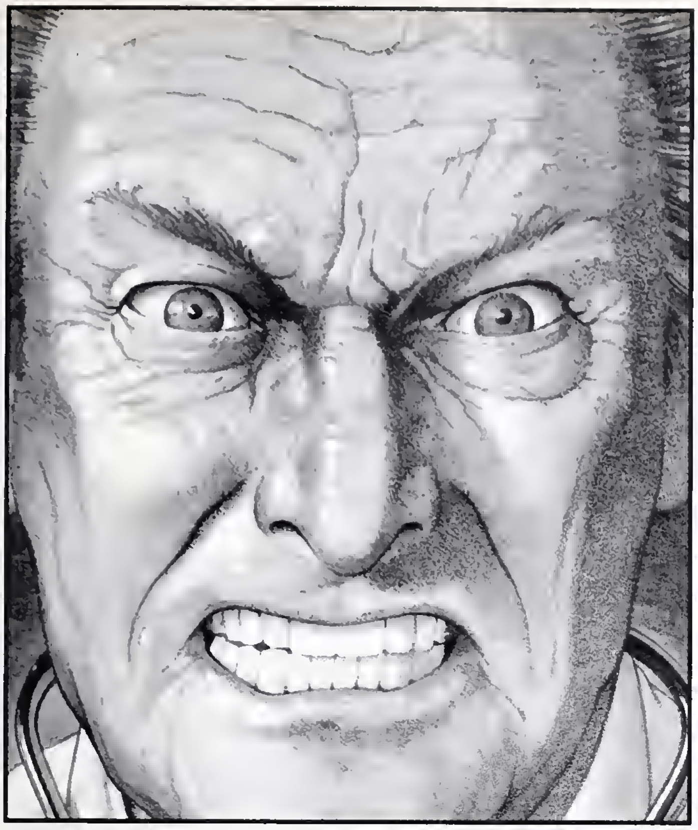

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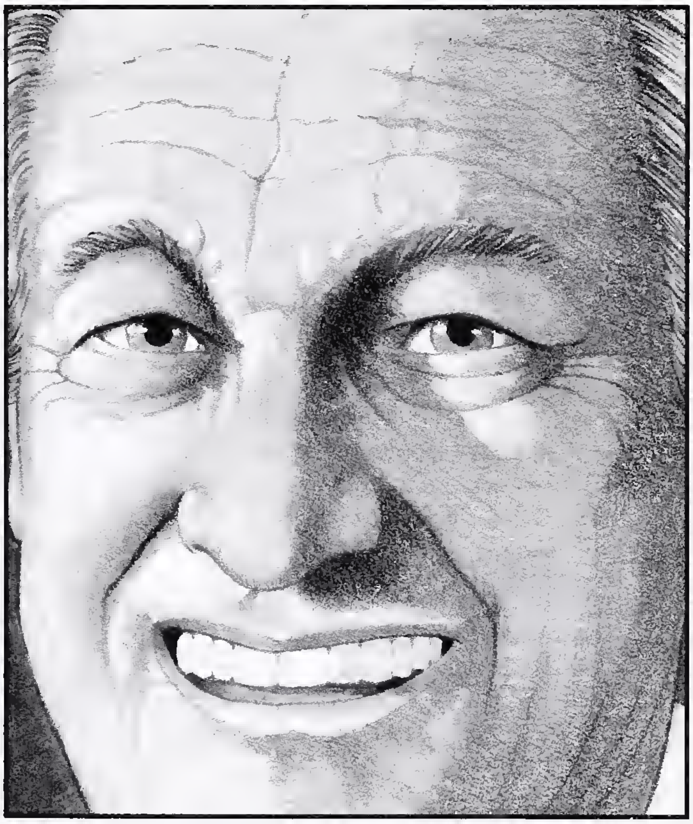

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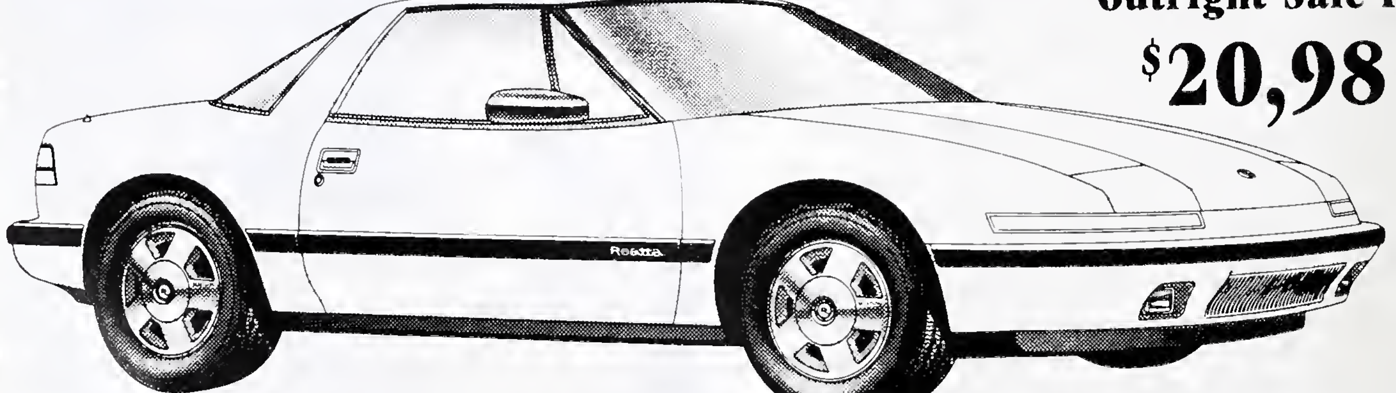

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Special Article

Humanities now?

Lawrence Kahn, M.D.

Increasing interest has been generated among some educators in recent years, to provide more instruction in the humanities in medical education. That teaching would include subjects relating to medicine within the classic disciplines of the humanities, namely, history, literatuare, language and philosophy. The question is whether such pedagogy pertains sufficiently to the medical education of a physician to justify its cost in time, effort and money. Can we really afford to deal with the humanities at a time when this profession is undergoing such rapid progression in scientific advance and such disturbing changes in medical practice? Is this the time for humanities?

The academic content of the humanities is broad and deep. First of all, one could ask, how can that vast body of knowledge be dealt with substantively in the midst of crowded medical school curricula? Can such efforts challenge with relevance the importance of medicine's scientific advances that even now preempt the time and effort of students, teachers and practicing physicians to "keep up"?

Secondly, one could argue the humanities are interesting, even fascinating to many, but, meanwhile, practitioners are beset with the troubles of a profession undergoing severe change. Some consider medicine as a profession under siege. Outside commercial interests impose unprecedented challenges to professional autonomy. Despite this profession's extraordinary technical capability, we serve a skeptical public. We are accused of not listening — of being interested only in curing — not caring. The threat of malpractice is a constant shadow. And medicine as a career choice is losing its appeal; applications to medical schools have decreased by more than half in the last decade.

Finally, in considering the public health, we have taken the position in this country that health care should be available to all. Yet, 37 million Americans are without health insurance. Does the study of humanities relate to the solutions of these kinds of problems?

"Life is short, the art long . . . and judgment difficult," takes on ever greater meaning.[1] Humanities now?

The answer is, yes. Humanities are an important and necessary part of medical education. Why? It is because a reasonable understanding, if not close familiarity, with the humanities addresses these concerns in non-specific but quite fundamental ways. Physicians inevitably face uncertainties, not only as individual practitioners but collectively as a profession. Those dilemmas now are quite different and far more complex than they were a generation or two ago. Those technological advances and the expansion of health care delivery and third party pay have their price. We are not prepared well for the questions those changes have generated. Physicians should be able to argue their positions on these matters with an educational background that empowers them to do so. Exposure to the humanities in medical school can provide young physicians with that background. Continuing humanities education can do the same for the experienced practitioner.

The study of the humanities helps us discipline our minds. It helps us evaluate differing viewpoints and separate fact from opinion. The history of medicine helps us know where we came from. The physician and patient in literature gives us the rare opportunity to see

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The author is a professor of pediatrics at Washington University School of Medicine and St. Louis Children's Hospital, St. Louis, Missouri.

ourselves as others see us, favorably and unfavorably. Philosophy, particularly ethics, that branch of the discipline so frequently invoked in these times of our increased technical competence, engenders an awareness of the importance of our decisions.

These are broad generalizations. Most of us prefer and are trained to deal with specific evidence. There is little data to show that the inclusion of the humanities in the education of physicians make them better practitioners. Nonetheless, there are clear arguments. Knowing where we came from as a profession and knowing how we fit into society through literature or history or philosophy can only help us understand who we are. Pelligrino[2] reminds us of three good reasons for teaching the humanities: they help us learn to think better for ourselves, be more creative, and gain greater gratification from what we do. Those are highly desirable attributes. But there is yet another compelling realization that urges support for teaching humanities in medical education — including continuing medical education. The humanities help us learn and remember who we are in our culture.

The role of the physician is becoming highly complex. We hold extraordinary professional power, and it is quite likely that power will grow. If the humanities do no more, they will allow us to step back from the canvas, as it were, and measure who we are and the weight of what we do within the society in which we participate. It might help us listen better and be more empathetic. It might help us hold ourselves to proper scale, avoid pretense, arrogance, greed. Would that help us be better physicians? It could not be otherwise.

Let us teach humanities now. ■

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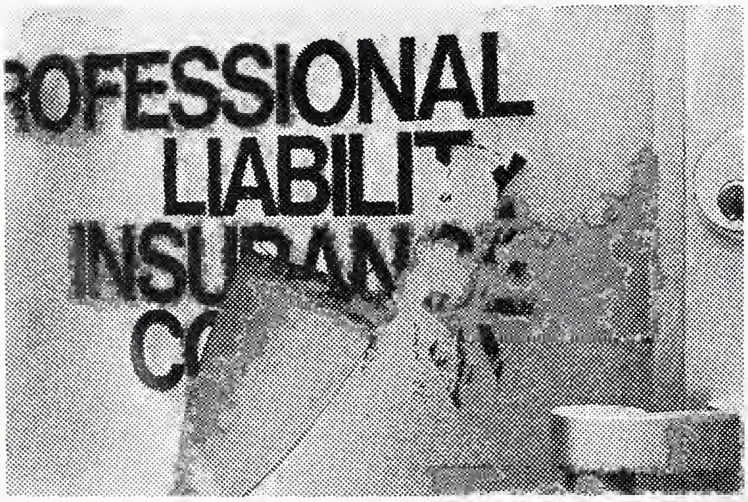

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MSMA Member Viewpoint

A Voice From the Basket

Clyde M. Witt, M.D.
St. Louis, Missouri

Long ago, in a country far away, there lived a family. The son, the father and the grandfather. One day the teenage son found his father busily weaving a large basket in front of their dwelling. He watched with interest and not little curiosity as his father worked. He had never seen the man working in such a way before. He was curious.

"Father, what are you making?"

"A basket, son."

"But it's so big. What is it for?"

The man looked away from his son. He was obviously disturbed by the question. Then he looked up, his face red and saddened.

"It is for Grandpa."

"Grandpa. What will he do with it, Dad?"

The father pulled the lad to his side. He put his arm about the youngster's shoulder.

"Son, as you can see, Grandpa is getting very old. He has no teeth, and he has lost his hair. He is unable to take care of himself any more. All he does is sit in the sun, and talk to people. Doesn't contribute anything."

"Is that bad, Father?"

"Well, Son, among our people when someone grows old, and can no longer work for the tribe or his family they make such a basket and put the old person in it, and throw them over the cliff to the rocks below."

The boy pulled away, horrified.

"Do they always do that?" His father nodded.

The young man thought a minute.

"You mean they throw away such a nice basket?"

"Yes, Son."

The boy thought a minute more. "Why don't you just throw him out of the basket and keep it?"

"Why would you do that son?"

"Then I could use it when your turn comes."

As nearly as I can estimate, with the help of a very nice local Medical Society Librarian, there are between two and three thousand retired physicians in the State of Missouri who are about to be thrown over the cliff. Physicians who have served honorably in their chosen profession, who have no interest in practicing medicine upon the general public, but who would like to maintain their license if only to occasionally prescribe for themselves and their immediate family, an antibiotic for a son or daughter, or a little codeine for a wife who, while hanging the picture (the one he forgot), hit her thumb instead of the nail. Men and women who would like to keep the license, and the title of "Doctor," that has become a part of them over the years.

The new Revised Statutes of Missouri 334.075 and 334.080 make no provisions for such retired physicians. Twenty-five hours of Continuing Medical Education ordinarily would be no great chore for anyone in the active practice of medicine, but it could well constitute a genuine hardship for one who is not in the mainstream of medicine. Some are too old to drive to the locations locally at night to obtain such credits, others have physical disabilities, which limit their mobility.

Personally, I fall into the latter categories, but it does not prevent me from attending a

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Dr. Witt, a fourth generation Missourian, obtained his B.S. in Medicine from the two-year school at the University of Missouri-Columbia School of Medicine. He completed his medical school training at Washington University School of Medicine and interned at St. Louis City Hospital. A radiologist, Dr. Witt taught part-time at St. Louis University Medical School for 28 years. He retired from practice in 1980. Dr. Witt spends his leisure time gardening, writing and reading unlimited books. He has been a member of the MSMA since 1948.

social luncheon attended by up to 15 retired radiologists the third Tuesday of each month, at a local restaurant. These men vary in age from mid-fifties to nearly 80 years. All of them are alert and interested in medicine, but not particularly in the specialty that has nurtured them for 20 to 50 years. They would like to keep current in what is going on in the field, but not necessarily in the field of radiology. They discuss among other things the problems of third party payment, the incursion of Big Government into the field, and of course what is new generally in medicine as a whole.

It is our feeling that we who are retired and still have our licenses, should be given some preferential treatment. We are men of honor, who have rendered that same honorable status to the field of medicine. We feel that we should not be cast over the cliff without being heard.

Would it be possible to have a classification of ''Retired Physicians'' whose licenses would be valid only in treating their own immediate families? Would it not be a good idea to provide them with videocassettes of suitable medical subjects, in order to obtain their twenty-five hours of CME per year? In addition many valuable subjects are presented on Cable TV, (Channel 26 on the Cencom II in St. Louis) which are as good or better programs than I have seen attending conventions in far away cities in the past years. Could these not be used to obtain credit?

If you would care to print this, I'm sure that retired physicians from all over the State of Missouri would be happy to express their opinions upon the subject. I feel that age has its virtues, and an honorable man can still protest even when he is in the basket. ■

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AMA President Inaugural Address

Let's Work Together!

James E. Davis, M.D.

Dr. James E. Davis delivered "Let's Work Together" on June 29, 1988, in Chicago, at ceremonies where he was inaugurated as the 143rd President of the American Medical Association.

I feel privileged to join the ranks of 142 predecessors who have had the singular opportunity to serve as President of the American Medical Association. As I stand here — humbly, respectfully and enthusiastically accepting the challenges of this office — I am honored to be in the presence of this audience, the leaders of American medicine.

Medicine at a Zenith. This opportunity is especially meaningful to me because it comes at a time when our profession is at a zenith of unprecedented accomplishments. Working with the people of this country, we have achieved so much! Life expectancy continues to lengthen. The quality of life continues to improve. And the public now exhibits a widespread and impressive commitment to self-care and the prevention of illness.

The advances of many decades are manifest in the decline in the incidence of heart attacks and strokes, in the long and productive lives many people lead for years after a cancer diagnosis, and in the fact that infections — except for AIDS — are better controlled than ever before.

There Is Still More to Do. And yet, there is much that both the medical profession and the American people still need to do. We must get a handle on the high cost of health care. We must find solutions to the drug crisis and other frightening conditions that plague so many American adolescents. We must develop ways to reach out and care for the medically indigent. We must solve the problems of providing adequate physical and mental health services, and long-term out of hospital care, for the elderly. Indeed, we must strive to assure that every single American has access to proper and affordable care, whenever and wherever it is needed!

This is a serious agenda of serious problems. And if we are serious about attacking them, all Americans must give not only attention, but also active participation, to this agenda.

We must strive to assure that every single American has access to proper and affordable care, whenever and wherever it is needed!

Doctors and the People We Serve. This evening, I want to speak directly to this distinguished audience assembled here, and also to reach out beyond this room to every physician in this country, and to the American public, as well. I want to get my message across to both physicians and the general public, because I believe this is a pivotal time — a pivotal time in the relationship between doctors and the people we serve.

It used to be that everybody understood: medicine was the doctor and the patient. And artists have depicted the doctor-patient relationship beautifully over the years. I remember — and I'm sure many of you remember — that Norman Rockwell in the 1950s had a cover on the *Saturday Evening Post* that shows the doctor and the patient in the examining room — scales in the corner and diplomas on the wall. A middle-aged physician is fixing a hypodermic for his young patient, a small boy standing on a chair with his rear end exposed, waiting for the shot he knows he has to have.

Everyone who has ever seen that picture can relate to the way the little boy's apprehensive scowl is tempered by an admiring look of great trust and faith, because the young man knows that there is a bond between him and his doctor.

The Doctor and Patient Divided. A lot has changed since Norman Rockwell painted this picture. And if Mr. Rockwell were alive and painting today — if he were painting the canvas of medicine in the 1980s and 1990s — he would have to divide the doctor and the little boy by hospital administators, insurance company executives, federal regulators, state and national legislators, and even the doctor's own peers looking over his shoulder. Like it or not, it is clear that all of these are going to remain in the picture, in one form or another.

It used to be that everybody understood: medicine was the doctor and the patient. . . . We must preserve the special doctor-patient bond.

We cannot return to a bygone era. And we certainly would not want to give up modern medical advances, even though we might sometimes wish for a simpler world. Yet we must preserve the special doctor-patient bond — that special trust and faith. We must connect physicians with patients in the public's mind — and do it just as closely, just as indelibly, as Norman Rockwell did.

And I believe the key to doing this is service.

Medicine Rooted in Service. Service has always been one of the hallmarks of our profession. Throughout history, physicians have been known for service to patients, service to the institutions of medicine and of healing, service to the community — service to mankind. Physicians are still the most dedicated, the most serving of all people. Our willingness to endure long, arduous periods of education and training, our role as the patient's advocate, our on-call and on-demand lifestyles, our charity — these all bespeak our service.

Recent data show that doctors are donating increasing amounts of care. In fact, in a recent survey of primary care physicians, sixty-eight percent had volunteered their time at a free clinic, nursing home, or other social service health care facility. And one third of the care given by emergency physicians in this country is donated.

Organized Medicine and Contributed Services. Often, organized medicine is the mechanism for contributed services. Already, two specialty societies and eleven state medical associations have instituted voluntary Medicare assignment programs. And an equal number of state associations are considering such programs. As an example of another way we can serve those at, or below, the poverty level, a Kentucky Medical Association program that provides free care for the medically indigent has tapped more than half of the physicians involved in active patient care.

So there is extensive evidence that physicians do serve, and serve generously. But the public does not always perceive us as being charitable. Yes, they repect us for our learning. Yes, they appreciate our long hours of work. Yes, they regard with awe our ability to apply highly technical scientific information for their individual benefit. And yes, as a result of this perception of what doctors do for them, they have afforded us a special status in society, and they still rank us at the highest levels of trust and confidence.

Yet they are not sure why we serve. They wonder, are we altruistic for their benefit? Or hard working, primarily for our own?

For physicians, who have always held service as our highest goal, it is something of a shock that our motives are questioned. But it is a sign of the times. So we must accept it, and take it as a mandate to show clearly to the American people that our primary motive is, as it has always been, to serve them.

How Physicians Serve. *Patient Contact:* Service starts with our patient contact. Some four million patient interactions every day give American doctors the opportunity to demonstrate not only our competence, but also our genuine compassion, our caring, and our devotion to each individual patient we serve.

Teaching: Service continues with our teaching. At least a third of us are already involved in medical education, full-time or part-time, paid or volunteer. But all of us must extend our teaching to our patients and to the public.

The public does not always perceive us as being charitable. . . . They are not sure WHY we serve. They wonder, are we altruistic for their benefit? Or hard working, primarily for our own?

Involvement: We also serve through involvement. Physicians' talents, and those of our spouses, may lead to involvement in many areas. For instance, you may choose to lead a church youth group, work with scouts, or give time in the school library. You may decide to coach a Little League team, or drive the elderly to the grocery store. You may want to initiate a recreational program in a nursing home, volunteer with Meals on Wheels, or visit shut-ins. You may want to be a museum docent, sing in a choral group, or play in your local symphony. Or you may choose to run for public office — for certainly, there are opportunities at all levels of government.

Throughout the United States, physicians and their spouses are serving their communities in the ways I've described, and more. The point is, we all must give of ourselves. We all must get out into the community. We all must let the public know we care.

In my home town, patients are always telling me what a wonderful thing it is for the medical profession that one of us — a local physician — is on the bench at every major athletic event where our high schools compete, that a physician's spouse serves as county commissioner, and another is a member of the school board. I'm proud to say that my wife Margaret has also served Durham and its people in many ways, not as an elected official, but in activities ranging from teaching Sunday School to setting up day care centers to serving on the Durham Housing Authority. And she has been involved all the while with the Medical Auxiliary. Our Auxilians do so much for our profession that we cannot do for ourselves, and I thank you all.

Let me assure you that in addition to enhancing our professional image and helping others, service truly is its own reward.

And in the years to come, the big issues — issues like Medicare, substance abuse, professional liability, AIDS, and rationing health care — are ultimately going to be decided in the public forum. When we have convinced the public that our mission in life truly is to serve them, we will have their support as these issues come up.

Getting Involved. Dr. Edmund Pellegrino, who directs the Kennedy Institute of Ethics, recently observed, "How physicians resolve the inherent tensions between self-interest and altruism has always been a surer test of moral quality than the oaths they utter." Doctor Pellegrino is quite right. But often all it takes to resolve the tension between self-interest and altruism is a little peer pressure carefully applied. So if your colleagues back home say they're too busy to volunteer, take the time to ask them personally to get involved in your community.

In the years to come, the big issues are going to be decided in the public forum. When we have convinced the public that our mission in life truly is to serve them, we will have their support as these issues come up.

Most of us do what we do not because we see an opening and move for it, or plan ten years ahead, but because somebody says, "Will you do this?" That's how I got into organized medicine. When a surgeon friend of mine called up and said, "Jim, I want you to be my vice-speaker in the North Carolina Medical Society House of Delegates," I took the job. I did this with some fondness for the activity, but mostly for love of the man and the opportunity to work with him. My life, and I guess most everybody's life, has been that sort of thing. We get involved in service because somebody asks us. We model ourselves after those we respect. And before we know it service is a way of life.

Message to the American People. As I go around the country and talk with the people of America during the coming year, I will be sharing with them the service ethic in which medicine has always been quietly and nobly rooted. I will be reminding them that the American medical system is truly one of our country's greatest treasures. I will be urging them: concerning health, beware, be informed, be involved.

Beware of changes that make it difficult, even impossible, to protect the high quality care you expect and deserve. Be informed about what constitutes good health and do what you can to help yourself and others to have good health. And be involved in insuring that collectively, we make the right political decisions, now and in the future.

Physicians Need the Public's Support. For example, today's House of Delegates' action on Medicaid reform makes a solid statement of physicians' concern for the good of those least able to fight for their own medical needs. We have pledged our power, and our prestige, to help these needy people. But we also need the power of the American people — to urge Congress to move quickly to enact Medicaid reform. And we need the people's involvement to keep working with us in the same cooperative spirit as we address other needs on the health care agenda.

Three Challenges. *To Physicians — Tithe:* Finally, I make three challenges this evening. First, I challenge every physician in America — whether in practice, education, research, administration, or in any other endeavor — I ask every physician to tithe of your time for the benefit of the American people. Just one-tenth of the normal work week, four hours a week serving the public in the way you think is most helpful.

To the Public — Create a Constituency for Health: Second, I challenge each American citizen to learn more about, and work for, even better health care in America. I am asking the public to help create a strong, informed constituency for health.

As I go around the country and talk with the people of America . . . I will be reminding them that the American medical system is truly one of our country's greatest treasures. I will be urging them: concerning health, BEWARE . . . BE INFORMED . . . BE INVOLVED.

To Physicians' Organizations — Set Up Ombudsman Offices: And to catalyze both the physician and the public efforts, as my third challenge, I am asking every physician's organization in this country at every level — county, state, and specialty — to organize and staff ombudsman offices. These offices will encourage every physician member to fulfill the service tithe. They will assist physicians in identifying work which is individually most meaningful. They will provide health care information to the public and referrals to physicians. They will receive the public's questions, concerns, suggestions, and recommendations about health matters, and follow through on consumer complaints.

In order for these ombudsman offices truly to become a two-way liaison between physicians and the public, medical organizations can tap the growing ranks of retired or semi-retired physicians. This is a group of highly qualified, highly competent, dedicated individuals who know how to get things done. Such ombudsman offices, staffed by retired physicians, will surely show our patients, our neighbors, and our community leadership that their health is our number one concern!

President's Citation for Service. To demonstrate the significance of this proposal, I'm pleased to announce this evening that the Board of Trustees of the American Medical Association has established a special award, the President's Citation for Service to the Public, to honor medical associations and societies that excel in service. And I look forward to presenting the first award in December.

So this evening I urge the physicians of America: make service an avocation, as well as a vocation. Because service is something we must do, so that America's patients know in no uncertain terms that doctors are men and women whose first motivation is public service.

Let's Work Together! The days portrayed by Norman Rockwell may be gone forever. But if all of America's physicians will rededicate ourselves to serve each of our communities, we will bring into sharp focus a clear picture of why and how doctors serve each of our patients.

Make service an avocation, as well as a vocation. . . . If all of America's physicians will rededicate ourselves to serve each of our communities, we will bring into sharp focus a clear picture of why and how doctors serve each of our patients.

Last week just before I came to Chicago, an elderly patient of mine said, "Doctor Davis I'm glad you're going to lead the AMA. You'll travel the country; you'll even travel the world. But always let your office here know where you are, for there may be something I'll want to ask you."

This evening there is something I want to ask YOU, the physicians and the people of this country. I ask you, LET'S WORK TOGETHER, so quality health care will not only continue in America, but will continue to improve.

James E. Davis, MD, President, American Medical Association. *A surgeon from Durham, North Carolina, Dr. Davis has long been active in organized medicine. Before he was chosen as the AMA's President-Elect in 1987, he had served as Speaker of the AMA House of Delegates since 1984, and as Vice Speaker since 1981.*

A former Governor of the American College of Surgeons, he *has had extensive service to medical groups in his native North Carolina, including the presidency of the North Carolina Medical Society, the North Carolina Surgical Association, the North Carolina Chapter of the American College of Surgeons, and the North Carolina Division of the American Cancer Society. He was founding President and Board Chairman of the Medical Mutual Insurance Company of North Carolina and is currently Chairman of the Board of Directors of the North Carolina Institute of Medicine.*

In addition, he served as President of the Greater Durham Chamber of Commerce, and in February he received the Chamber's Civic Award as Man of the Year.

A graduate of the University of North Carolina, he has served as President of the University's General Alumni Association and of its Medical Alumni Association. Both the School of Medicine and the General Alumni Association have honored him with distinguished service awards, and in May 1988 he was given the Honorary Degree of Doctor of Science by his alma mater.

Doctor Davis received his M.D. degree from the University of Pennsylvania Medical School and completed his internship and residency in surgery at the New York Hospital-Cornell University Medical Center. He is a Professor of Clinical Surgery at Duke University School of Medicine and former Chairman of the Department of Surgery at the Durham General Hospital. He is a Diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons.

Doctor Davis is the author of many papers on topics of general and thoracic surgical interest, and he has written extensively on the subject of ambulatory surgery. ■

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Metastatic Thyroid Adenocarcinoma Presenting as Exophthalmos

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A case report illustrates the unusual appearance of unilateral proptosis due to a metastatic adenocarcinoma of thyroid origin. The patient had had a partial thyroidectomy some 20 years previously, with no report of malignancy at the time.

Graves' disease is the most common cause of exophthalmos among thyroid disorders,[1] although orbital symptoms may occur with other thyroid abnormalities, such as Hashimoto's thyroiditis,[2-4] primary hypothyroidism,[5] Reidel's struma,[6-8] and thyroid damage associated with neck irradiation.[9-10] While the exophthalmos associated with thyroid endocrinopathy may be unilateral,[11-14] orbital cellulitis and mucocoele are more frequently associated with unilateral disease. In this report, we describe a unique patient who had exophthalmos due to metastatic follicular thyroid cancer.

Case Report

A 71-year-old black woman with a history of a partial thyroidectomy for benign disease more than 20 years earlier came to Jewish Hospital at Washington University Medical Center with a three-month history of a watery right eye. She was noted to have unilateral proptosis. Visual acuity was OD 20/30, OS 20/40. The extraocular movements were intact, without lid lag or diplopia. There was no conjunctival injection, but injection was noted over the right medial and lateral rectus. The right fundus was without optico-ciliary shunt vessels or retinal striae. Tearing was noted in the right eye, and Hertel exophthalmometer measurements were 29 mm OD and 23 mm OS. There was a suggestion of a mass palpable through the right lid. The right lobe of the thyroid gland was enlarged, but there were no palpable nodules. Neurological evaluation did not show hyperreflexia or myopathy. The physical examination was otherwise normal. Laboratory testing indicated a free T_4 of 1.5 ng/dL and T_3 RIA 110 pg/dL, both within the normal range.

Graves' ophthalmopathy was suspected. A computed tomographic (CT) scan showed a large mass in the right retro-bulbar area, with erosion of the greater wing of the sphenoid and invasion into the sphenoid sinus. A transorbital biopsy of the mass, via lateral canthotomy, was performed. A highly vascular, firm, encapsulated tumor was encountered. Microscopic examination revealed metastatic follicular carcinoma, consistent with thyroid origin (Fig 1). A total body iodine uptake scan revealed uptake only in the thyroid and in the right orbit (Fig 2).

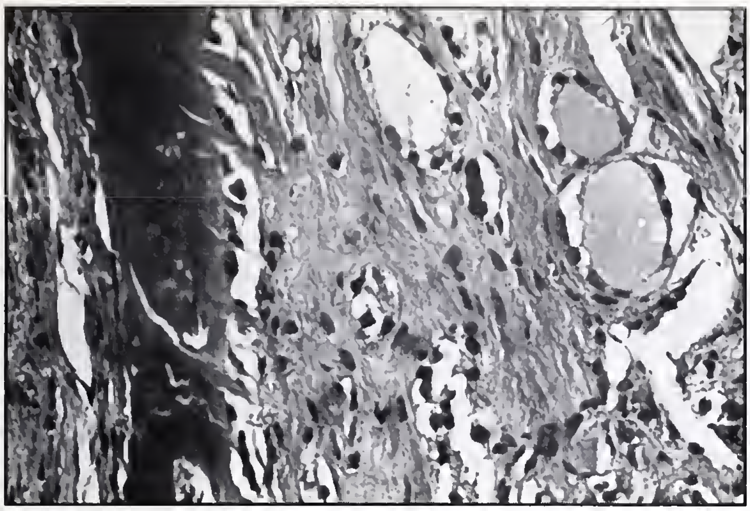

Fig 1. Histologic appearance of right retro-bulbar mass, stained with hematoxylin and eosin and magnified 250×. The specimen shows a metastatic follicular adenocarcinoma, consistent with thyroid origin. A bony trabeculum is at the left.

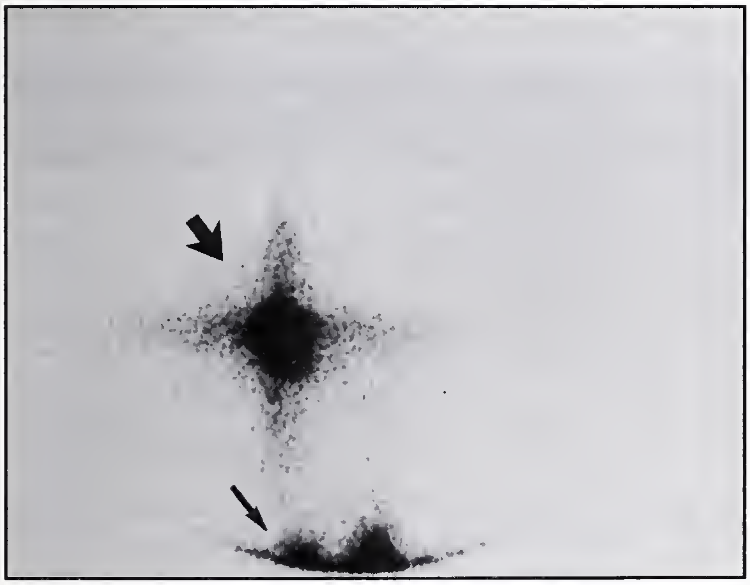

Fig 2. Antero-posterior gamma camera view of the face utilizing ^{131}I. Intense uptake is seen in the right orbit (broad arrow). The thyroid is seen at the inferior margin of the image (thin arrow).

The patient was treated with radioactive iodine (100 and 150 mCi) on two occasions, nine months apart, and with L-thyroxine suppressive therapy. Because of continued thyroid uptake of iodine on total body ^{131}I scans, a total thyroid resection was performed 22 months after her initial presentation. Histologic examination of the specimen showed extensive fibrosis secondary to radiation effect, hemosiderin-laden macrophages, but no epithelial hyperplasia or tumor. She has since improved symptomatically and has only mild residual proptosis. The iodine scan remains positive in the right orbit five years after treatment, but the patient has felt well and is free of exophthalmos.

Comment

The patient described in this report was euthyroid and had proptosis without ophthalmoplegia. Iodine uptake was limited to the thyroid and the right orbit. She proved to have a metastatic tumor, with the thyroid gland as the most likely site of origin. Although tissue from the original thyroidectomy specimen was unavailable and the patient had been told at that time that she did not have a malignancy, the histological distinction between follicular adenoma and adenocarcinoma is difficult to make. No tumor was found in the second thyroidectomy, which was performed more than two decades after the first and which followed treatment with radioactive iodine.

Proptosis is uncommon in euthyroid patients, but has been described in Graves' disease.[14] In Hales' series of 104 patients with Graves' disease, eight were euthyroid. Of these, six had lid retraction, seven had exophthalmos, and five had ophthalmoplegia; this suggests that some euthyroid patients with Graves' disease have exophthalmos without ophthalmoplegia.[15] This was corroborated by the report of Solomon, et al, of 17 euthyroid patients with Graves' disease. In that series, four patients had proptosis alone and seven had unilateral exophthalmos; all had ophthalmoplegia.[3] In a third series of 46 patients with euthyroid Graves' ophthalmopathy, 14 cases were unilateral.[16]

Metastatic neoplasms to the eye and orbit are the most common ocular tumors and may result in unilateral proptosis.[17-20] The majority of metastatic lesions invade the uveal tract, but orbital involvement occurs in 10% to 28%,[17, 20-23] with breast adenocarcinoma and lung cancer the most common primary tumors reported.[24-26]

Eight cases of pathologically documented thyroid tumors with orbital metastases have been reported.[27-33] Another three cases have been recorded in selected series of orbital computed tomographic scans, but histological and clinical data in these cases are lacking.[34-36] Among the tumors with a histologic report, the majority were follicular carcinoma.[1, 27, 33]

While a variety of methods can be used to differentiate orbital malignancy from Graves' ophthalmopathy and other causes of unilateral exophthalmos,[37] ultrasonography[38, 39] and CT scanning seem to be the methods of choice and have comparable accuracy (72% to 93% for CT scans;[40-42] 76% to 90% for ultrasound[38, 41]). Occasionally, mass lesions appear on CT scans[43] and ultrasound[38] in Graves' ophthalmopathy, but erosion of bone is inconsistent with Graves' disease.

Prior to the availability of ultrasonography and CT scanning, many patients with coexisting orbital tumors and thyroid disease may have been presumed to have Graves' disease and may not have had a biopsy performed. Therefore, the incidence of thyroid orbital metastasis may appear to have increased when recent CT scan series are compared with clinical studies performed over the years. Our patient illustrates the importance of considering neoplasm as the cause of ophthalmologic findings in patients with concomitant or antecedent thyroid disease.

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Reprints

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Postoperative Epidural Analgesia

After Vaginal Hysterectomy

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The authors report on their retrospective study of patients receiving epidural narcotics for relief of postoperative pain. The use of epidural analgesia for these patients appeared to reduce not only the level of pain, but also the length of hospital stay.

Wang et al[1] first reported the use of spinal intrathecal narcotics in human beings in 1979. They administered 0.5 or 1.0 mg morphine intrathecally via the second or third lumbar interspace to cancer patients with intractable pain and found that the analgesic effect lasted 12 to 24 hours. Since that time, morphine and other opioids have been given both intrathecally and epidurally to diverse patient groups — cancer patients as well as postoperatively to patients undergoing orthopedic,[2] intra-abdominal,[3] and intra-thoracic[4] surgical procedures. Studies in animals and human beings indicate that the predominant site of action of spinally administered opioids is the substantia gelatinosa of the dorsal horn of the spinal cord.[5-7]

The onset and duration of analgesia as well as the number and severity of side effects are attributes of the physical and chemical properties of the various opioids. The frequency and severity of typical side effects such as nausea and vomiting, itching, dizziness, and respiratory depression are apparently related to the concentrations of opioids in the brain as the drug migrates cephalad from the site of injection in the cerebrospinal fluid.[8] An opioid with a high lipid solubility has a rapid absorption rate and onset of action, leaving minimal residual cerebrospinal fluid concentration of the drug to migrate cephalad. An opioid with low lipid solubility has a slower onset of action and leaves greater residual amounts in the cerebrospinal fluid that can cause adverse side effects. Morphine, a very hydrophilic agent with low lipid solubility, is associated with a greater risk of side effects after epidural injection than more lipid-soluble agents such as fentanyl or sufentanil.

The advantages of epidural injections over intrathecal injections are twofold: The risk of dural puncture and its potential sequelae is eliminated, and catheter placement for use over long periods of time is facilitated.

From February 1975 through July 1985, 28,000 epidural anesthetics were given during labor and delivery at St. John's Mercy Medical Center, St. Louis, Missouri. Postoperative epidural narcotics have been used successfully for patients undergoing cesarean sections since 1979. The excellent clinical results in patients after cesarean section suggested that epidural narcotics given postoperatively might also benefit patients undergoing other surgical procedures.

The purpose of this study was to investigate whether the use of epidural narcotics in the postop-

Table 1

Characteristics of Fibroid Patients Having Vaginal Hysterectomy with Coring (Ranges in parentheses)

	Number of Patients	*Age (yr)*	*Parity*	*Uterine Wt (gm)*	*Length of Surgery (min)*
Group I	40	38	2	173	38
(Gen)		(31-52)	(1-3)	(115-269)	(25-60)
Group II	40	42	2	239	39
(Gen/EPI)		(34-53)	(0-5)	(110-975)	(25-80)

GEN = General anesthetic/IM and PO postoperative narcotics
GEN/EPI = General anesthetic/postoperative epidural narcotics

Table 2

Side Effects Observed in Vaginal Hysterectomy Patients

Side Effect	*Group I*	*Group II*
Itching	0	3*
Nausea and vomiting	4	4
Urinary retention	1	3

* One epidural discontinued at 20 hours because of itching

erative period would provide satisfactory analgesia and decrease the length of hospital stay in a selected group of patients having vaginal hysterectomies.

Methods and Materials

This study is a retrospective review of 80 patients who had vaginal hysterectomies with intramyometrial coring for leiomyomas between January 1984 and December 1985. The advantages of intramyometrial coring to extend the indications for vaginal hysterectomy have been documented to reduce hospital stay for patients who traditionally would have been subjected to abdominal surgery.[9] To determine whether epidural pain relief could reduce hospital stay even further, we selected at random two patient groups consisting of 40 patients each. The indication for surgery in all cases was fibroids and patients who had had reparative vaginal surgery were not included.

Group I comprised 40 patients who did not use epidural narcotics for postoperative analgesia. Thus, they were given the traditional general anesthetic during vaginal hysterectomy with coring and intramuscular and oral medication for postoperative pain relief. Group II comprised 40 patients who elected to have a general anesthetic for surgery but chose to have epidural narcotics for postoperative pain relief. Patient characteristics are listed in Table 1.

Prior to surgery, patients in Group II had a portex lumbar epidural catheter placed in either the second or third lumbar interspace using the loss of resistance technique. After a test dose of 3 ml of 1% lidocaine in 1:200,000 epinephrine, the catheter was taped in place. Both groups of patients were given isoflurane as the general anesthetic. Following surgery, upon arrival in the recovery room, Group II patients were given an initial epidural bolus injection of 25 mg meperidine followed by a continuous infusion of meperidine via an I MED model #927 pump. The infusate of normal saline with 2 mg/ml preservative-free meperidine was given at a rate of 7 ml/hr (14 mg/hr). Meperidine was selected over morphine because of its faster onset of action and fewer side effects.[10]

Because this technique was new, the following protocol was established on an empirical basis:

1. During the first 24 hours, patients in Group II could request additional meperidine (25 mg IM) every four hours depending on their level of discomfort. Group I patients were given 75 mg meperidine and 50 mg vistaril every four hours as needed.
2. If a patient in Group II requested more than one intramuscular injection in any eight-hour period, the epidural infusion rate was increased to 16 mg/hr.
3. If side effects such as nausea and vomiting, itching, dizziness, or respiratory depression occurred, the infusion rate was decreased to 8 mg/hr for six hours. If side effects persisted after that time, the infusion was discontinued.
4. After the first 24 hours, supplemental analgesics were administered orally.
5. After 48 hours, all epidural infusions were discontinued and oral analgesics were taken at the patient's discretion.
6. All patients had an indwelling urinary catheter in place for the first 24 hours. After 24 hours, patients were catheterized if urinary retention was a problem.
7. A nurse checked each patient's vital signs every two hours and noted any side effects or complaints. A physician was notified if the patient's respirations were less than 10 per minute or at the nurse's or patient's request if side effects developed.
8. An anesthesiologist saw each patient at least twice a day to evaluate the effectiveness of the analgesia and document any side effects. Each patient rated analgesia twice a day as absent, unsatisfactory, satisfactory, good, or excellent.

Results

Only minimal side effects were observed (Table 2). None of the patients experienced clinically detectable respiratory depression. The epidural infusion had to be discontinued after 20 hours in one patient because of severe itching of the trunk and upper and lower extremities. With the exception of this one patient, all other side effects such as nausea, vomiting,

Table 3

Analgesia Rating by Vaginal Hysterectomy Patients

Patient Rating	*Group I*	*Group II*
Absent	0	0
Unsatisfactory	0	0
Satisfactory	29	7
Good	9	22
Excellent	2	11
	40	40

Table 5

Length of Hospital Stay in Days

	Length Hospital Stay in Days
Group I	4.000
Group II	3.175

p = < 0.001

Table 4

Postoperative Medication in First 48 Hours

	Mean Number of IM Medications	*Mean Number of Oral Meds*	*Mean Number of IM & Oral Meds*
Group I	3.7*	8.7	12.4
Group II	0.7**	4.6	5.3***

* Group I — Meperidine 75 mg, Vistaril 50 mg

** Group II — Meperidine 25 mg

*** 9 patients required no IM or oral medications

p = < 0.001

and itching were alleviated by decreasing the epidural infusion rate. Three patients in Group II required catheterization after the indwelling urinary catheter was removed.

All patients reported satisfactory to excellent analgesia (Table 3). Thirty-three of the patients in Group II rated their analgesia as good or excellent compared to only 11 patients in Group I. Thirty-one patients in Group II required some additional intramuscular or oral supplementation; however, nine patients in Group II required no supplemental postoperative pain medication during their entire hospital stay, even after the epidural narcotics were discontinued. Using the number of requests for either IM or oral medications as an objective indication of the level of analgesia, there was a statistically-significant difference in the two groups in the use of IM, oral, and total doses of IM and oral medication (Table 4).

Patients in Group II required less nursing care and had fewer complaints. They were more comfortable, needed less analgesic narcotics, had a more positive attitude about their recovery, were able to perform self-help activities faster, and required shorter hospitalization (Table 5). The difference in length of stay (0.825 days) between the two groups was statistically significant.

Discussion

Our previous clinical experience indicated that continuous infusion of opioids is associated with fewer side effects than intermittent bolus injections. A continuous infusion delivers the opioids more slowly to the spinal cord, which allows more complete absorption. Epidural infusion of narcotics has proven to be an effective analgesic technique with minimal side effects in patients undergoing cesarean sections.

This retrospective review demonstrates that epidural infusion of meperidine to patients undergoing vaginal hysterectomies with coring is a new technique that warrants further study. Patients who had postoperative epidural meperidine infusion required fewer supplemental pain medications, less nursing care, and were released from the hospital earlier than the patients who had the traditional intramuscular and oral postoperative pain medications. Most patients were mentally alert, cheerful, and active within a few hours after surgery.

The mental alertness of patients in Group II in the immediate postoperative period showed a marked contrast to that of patients in Group I. Patients were responsive and interacting with those around them quickly after surgery.

If we extrapolate these results to the large population of vaginal hysterectomy patients in this country or even to other populations of surgical patients, we can readily appreciate the medical and economic significance of improving patients' postoperative analgesia.

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Clinical and Genetic Features of Juvenile Rheumatoid Arthritis

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Juvenile rheumatoid arthritis is the most common rheumatic disease of childhood. Recent research has greatly increased the understanding of the pathogenesis and prognosis of this disease, and has helped to provide a rational approach to its differential diagnosis and treatment.

Juvenile rheumatoid arthritis (JRA) is the most common rheumatic disease of childhood. Estimates of prevalence vary, but there are between 60,000 and 250,000 people afflicted with this disease in the United States.[1] Approximately 5% of all cases of rheumatoid arthritis begin in childhood. It occurs in all geographic areas, in all races, and in all ethnic groups. Because of its onset in childhood, the potential physical, emotional, and economic impact of this illness is considerable.

While JRA may occur throughout childhood, the peak age of onset in girls is between ages 1 and 3. In boys, there is a bimodal age distribution, with peak incidence at ages 2 and 9.

Juvenile rheumatoid arthritis is a heterogeneous disorder, comprising at least three distinct clinical subsets. These are defined by the type of onset as pauciarticular, polyarticular or systemic. The clinical features of these subsets are compared and contrasted in Table 1. In this review we discuss the clinical, laboratory, and radiographic features of each subset. Aggressive treatment of JRA can have a significant impact on the eventual physical and psychological outcome of the disease. Thus, it is important that all practitioners who care for children are knowledgeable about the features of JRA, so that affected patients can be promptly recognized and treated. Finally, we will discuss important new information regarding the genetic basis of susceptibility to this disease, and review how immunogenetic studies have demonstrated that there is a genetic basis for the clinical subsets of JRA.

Clinical Features of Juvenile Rheumatoid Arthritis

Pauciarticular JRA

Pauciarticular onset JRA is the most common form of JRA in most studies, representing almost half of all cases.[2] Typically there is synovitis in one or two joints, although up to four may be involved. Findings can include pain, swelling, warmth, effusion, and decreased range of motion; it is important, however, to realize that children frequently do not complain of pain even when severe inflammation is present. The disease most commonly involves the knees, although it may also affect the ankle, elbow, or occasionally other joints. A child with typical findings of pauciarticular JRA is shown in Figure 1. This figure illustrates large bilateral knee effusions, with extension of the effusion into the suprapatellar pouch on the left.

In 20%-50% of cases of pauciarticular JRA, there is an associated chronic iridocyclitis. This is the most serious complication of pauciarticular JRA. It is typically asymptomatic at onset and, if untreated, can lead to blindness. Regular examinations by an ophthalmologist who is experienced with iridocyclitis are therefore an essential part of the care of a child with pauciarticular JRA. Antinuclear antibodies (ANA), which are frequently present in children with pauciarticular JRA, are especially common in those who also have chronic iridocyclitis, and thus represent a significant risk factor for the development of eye disease. The absence of ANA indicates lower risk but does not guarantee that a child will not develop

Table 1

Clinical Features of Three Subsets of Juvenile Rheumatoid Arthritis

	Pauciarticular	*Polyarticular*	*Systemic Onset*
Peak age of onset (in years)	1-3	1-3 girls; 2 & 9 boys	No peak age
Number of joints involved at onset	4 or less	5 or more	Variable
Systemic features	No	May be present	Yes
Associated iridocyclitis	20-50%	10%	Rare
ANA	75%*	40%	10%
IgM rheumatoid factor	< 10%	20%	< 10%

* 90% in girls with iridocyclitis

iridocyclitis; therefore, continued ophthalmologic monitoring is important in all children with pauciarticular JRA. Other laboratory findings in this subset of JRA may include an elevation of the erythrocyte sedimentation rate, and usually the absence of serum IgM rheumatoid factor. Radiographic studies of involved joints may be normal, or may reveal soft tissue swelling, juxta-articular osteoporosis, periosteal new bone formation, expansion of the growth plates, and juxta-articular erosions.

Polyarticular JRA

Polyarticular JRA is the form of the disease most closely resembling adult rheumatoid arthritis, and accounts for approximately 40%-50% of all cases of JRA. Polyarthritis most commonly affects the knees, wrists, ankles, and small joints of the hands and feet, including the carpal bones, metacarpal-phalangeal joints, metatarsal-phalangeal joints, proximal interphalangeal joints, and distal interphalangeal joints. There can also be inflammatory arthritis involving the cervical spine. Figure 2 shows the hands of a 15-year-old boy with polyarticular JRA and illustrates synovial swelling involving the second, third and fourth proximal interphalangeal joints, the fifth distal interphalangeal joints and the ulnar styloids. Iridocyclitis is uncommon in this subset of JRA, so after a child has had one or two normal eye examinations, further monitoring is usually not required. Growth retardation can be a significant complication of JRA, and may lead to micrognathia and brachydactyly from premature closure of the epiphyses. Other less common but serious features of polyarticular JRA include low-grade fever, lymphadenopathy, hepatosplenomegaly, myositis, pulmonary fibrosis, pericarditis, and vasculitis.

Laboratory studies in polyarticular JRA may reveal an elevated erythrocyte sedimentation rate, an elevated platelet count, or a normochromic, normocytic anemia. IgM rheumatoid factor is present in about 20% of these children, while ANA is present in approximately 40%. Intermittent hematuria or proteinuria may occur in polyarticular JRA, possibly due to an associated focal glomerulonephritis. Renal function is not impaired, but the presence of hematuria can make the monitoring of side effects during gold therapy difficult. Radiographic studies reveal findings similar to those seen in pauciarticular JRA, although the number and distribution of joints involved is different.

Systemic Onset

Systemic onset JRA, the least common subset of JRA, accounts for about 10% of all cases. This form of JRA is the most difficult to differentiate from nonrheumatic illnesses. It typically presents with intermittent, quotidian or double quotidian fevers, peaking in the late afternoon and then returning to normal. Fever may be as high as 40° C (104° F) and is often accompanied by a transient, faintly erythematous or salmon-colored rash. The rash can wax and wane, or even disappear, over a period of just a few hours, and is most often present during febrile episodes. Typically it consists of small, erythematous macules on the trunk and proximal extremities. The Koebner phenomenon, in which the rash is precipitated by rubbing the skin, may also be present. Synovitis is often a less prominent feature in this subset of JRA. Initially it may be absent, or limited to a few large joints such as the knees, ankles or wrists. It may also evolve into a polyarthritis involving multiple joints, as in polyarticular onset JRA. Hepatosplenomegaly, lymphadenopathy, pericarditis, pleuritis, and weight loss are other important features. These systemic findings of the illness typically dominate the clinical picture, as opposed to pauciarticular and polyarticular JRA, in which arthritis is the principal feature. Iridocyclitis is rare in this subset of JRA.

Laboratory findings in systemic JRA can include marked elevation of the erythrocyte sedimentation rate, which may be over 100 mm/hr. Leukocytosis or even a leukemoid reaction, with white blood cell counts over 50,000/dL can also occur. IgM rheumatoid factor and ANA are usually absent.

Radiographic studies in systemic onset JRA may reveal evidence of pericardial or pleural effusion on chest films. Appropriate radiographic studies may also reveal hepatomegaly or splenomegaly. Significant de-

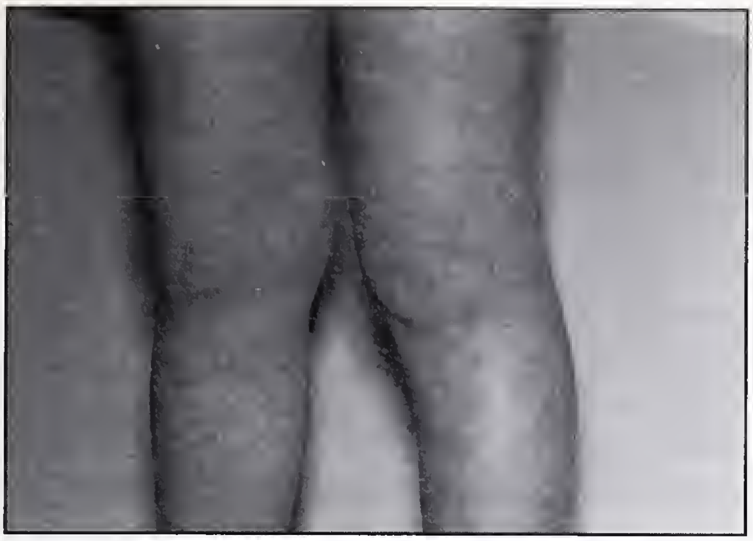

Fig 1. Typical findings of pauciarticular JRA in this female patient. There are large bilateral knee effusions, with prominent extension of the effusion into the suprapatellar pouch on the left.

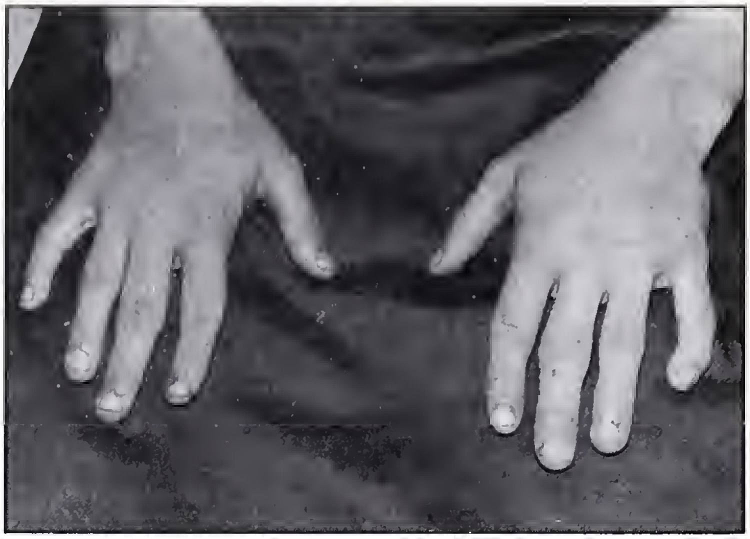

Fig 2. The hand involvement from polyarticular JRA in a 15-year-old boy is shown here. There is synovial swelling of the 2nd, 3rd and 4th proximal interphalangeal joints, the 5th distal interphalangeal joints and the ulnar styloids.

structive changes on joint radiographs do not generally appear until later in the disease.

Genetic Features of Juvenile Rheumatoid Arthritis

Genetic studies have proven to be powerful research tools, and have provided evidence that there is a genetic basis for the clinical subsets of JRA discussed above. Studies by numerous investigators, including ourselves, have shown that genes located within the human major histocompatibility complex (MHC), which encode various proteins such as the human leukocyte antigens (HLA), are important in susceptibility to JRA.

Understanding of the human MHC has expanded dramatically since we last reviewed this topic for *Missouri Medicine* in 1981.[3] The MHC is located on the short arm of human chromosome number six and can currently be divided into five major regions (Fig 3). These include the HLA-A, C and B regions; genes for complement components Bf, C2, C4A, and C4B; and the HLA-D region. The HLA-D region consists of a cluster of related subregions, including HLA-DR, DQ, DO, DZ, and DP. Using recombinant DNA techniques, genes from each of these subregions have been isolated, and the nucleotide sequences determined. Molecular mapping techniques have enabled investigators to determine the order of each of these genes on the chromosome.

In the human population there are many variants (so-called "polymorphisms") of each of the MHC-HLA genes. Each variant has a slightly different nucleotide sequence; the corresponding protein products are also different. The MHC is the most polymorphic gene complex known to exist. It is thought that this extensive variation is due to the role these genes play in the recognition of viral and other foreign antigens by T-lymphocytes. This diversity within the MHC provides researchers with a novel opportunity to examine whether JRA has a unique genetic basis that is linked to these important immune regulatory genes.

HLA Associations in Juvenile Rheumatoid Arthritis

Studies of HLA in JRA have revealed specific HLA associations for each of the clinical subsets of JRA (Table 2). Polyarticular JRA shares a genetic marker with adult rheumatoid arthritis, the HLA-DR4 antigen. Recently six different subtypes of HLA-DR4 have been described; however, only two of these are found more frequently in patients with polyarticular JRA and adult RA than in normal subjects, namely HLA-Dw4 and HLA-Dw14.[4, 5] One subtype, HLA-DR4/Dw14, occurs almost exclusively in patients with rheumatoid arthritis.

In pauciarticular JRA, the HLA associations are quite different from those in polyarticular JRA. The antigens HLA-DR5, DRw6, DRw8, and DRw52, but not DR4, occur more frequently among patients with pauciarticular JRA than they do in the population at large. The HLA-DPw2 subtype is also more common in affected children. We have previously shown that HLA-DPw2 is an independent risk factor for susceptibility to pauciarticular JRA, and that it also confers risk for the development of iridocyclitis.[6] Two of the HLA-DR antigens, HLA-DR5 and DRw8, also appear to independently increase the susceptibility to chronic iridocyclitis. We are now recruiting patients and conducting a study to examine the nucleotide sequence of the HLA-DPw2 gene in pauciarticular JRA, using recombinant DNA methodology. We hope that this approach will allow us to define the molecular basis for the susceptibility to pauciarticular JRA and eye disease that seems to be associated with the HLA-DPw2 antigen.

The immunogenetics of systemic onset JRA has been less clearly defined than that for polyarticular or

Table 2

HLA Associations in Juvenile Rheumatoid Arthritis

Pauciarticular JRA	HLA-DPw2, DR5, DRw6, DRw8, DRw52
Polyarticular JRA	HLA-DR4, Dw14, Dw4
Systemic onset JRA	HLA-B8, B14, Bw35, B44, DR4, DR5, DR7

pauciarticular JRA. This form of the disease has been associated with several different HLA antigens, including HLA-B8, B14, B35, B44, DR4, DR5, and DR7.

In summary, immunogenetic studies of HLA in JRA have assisted practitioners in recognizing that, despite overlapping clinical features, there are at least three genetically distinct subsets of JRA. We are optimistic that further studies of these genetic differences will aid in the understanding of the pathogenesis of these subsets of JRA.

Differential Diagnosis of Juvenile Rheumatoid Arthritis

The differential diagnosis of JRA is broad. For each subset of JRA, a number of other diseases must be considered. Systemic onset JRA is the subtype most often difficult to diagnose with certainty. Because fever is typically the earliest and most pronounced feature of this illness, the number of disease entities that must be considered is large, encompassing systemic viral and bacterial infections, such as acute rheumatic fever and bacterial septicemia. Recognizing the associated rash and arthritis is the key to the diagnosis of systemic onset JRA.

In pauciarticular JRA the primary differential diagnostic consideration is septic arthritis. This is especially important in the child with a monoarthritis.

In the patient with polyarthritis, acute rheumatic fever (the incidence of which appears to be increasing), viral infections, bacterial infections, ankylosing spondylitis, Reiter's syndrome, and systemic lupus erythematosus must all be considered. Uncommon considerations also include immunodeficiency diseases and acute leukemias.

Treatment of Juvenile Rheumatoid Arthritis

The optimal treatment of JRA requires a multidisciplinary approach, including careful coordination of care between the primary care physician and a rheumatologist who is experienced in the treatment of JRA. Optimal treatment also requires the expertise of ophthalmologists, physiatrists, orthopedists, nurses, occupational therapists, physical therapists, social workers, and psychologists who have interest and experience in the treatment of children with JRA. Because it is an uncommon disorder, few practitioners have significant direct experience with JRA. Furthermore, because of the serious physical and emotional impact of this disease, and because a comprehensive treatment approach can alter outcome, we recommend that all children with JRA be evaluated at a center with expertise in the management of JRA. Optimal treatment also requires that primary care practitioners and pediatricians be knowledgeable about JRA, so that they can promptly recognize this disease. Of equal importance, it has been our experience that their continued participation in the care of the child is essential for successful long-term treatment.

Table 3

Treatment of Juvenile Rheumatoid Arthritis

First Step of Treatment

Aspirin or non-steroidal anti-inflammatory agent
- monitor blood level of salicylate with aspirin therapy
- withhold aspirin during intercurrent viral illnesses

Physical and occupational therapy

Education of child and family

Education of school personnel

Ophthalmological examinations

Second Step of Treatment

Intramuscular gold salts

Corticosteroids
- for severe systemic manifestations of disease
- for severe polyarticular JRA — always used at lowest effective dose and on alternate day schedule if possible

*Third Step of Treatment**

Consider trial with hydroxychloroquine or sulfasalazine especially for polyarticular JRA

Methotrexate, azathioprine or other cytotoxic agent for severe refractory disease

* It should be noted that these treatments have not been FDA approved for use in children.

The initial treatment is similar for all three subtypes of JRA and consists of high-dose administration of aspirin or a non-steroidal anti-inflammatory agent, combined with physical and occupational therapy. Education of the parents, child, and others involved with the child's care is also essential to successful therapy. Table 3 outlines our overall approach to the treatment of JRA.

Salicylate blood levels are routinely monitored during aspirin therapy. An attempt should be made to maintain a serum salicylate level of approximately 20 mg/dL. Aspirin is withheld during intercurrent viral illnesses because of its possible etiologic association with Reyes syndrome.

As with many chronic illnesses, denial by the parents or child may be a significant obstacle to effective therapy. Because of this, attention to the psychological needs of the entire family of a child with JRA is an important part of the total care program.

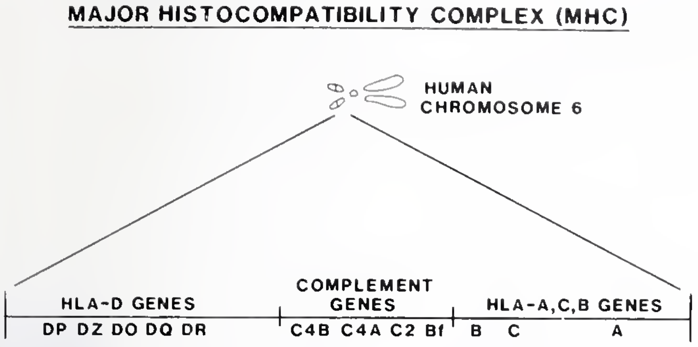

Fig 3. A diagram of the major histocompatibility complex, located on the short arm of chromosome 6. It encompasses 5 major regions, including the HLA-A, C, and B regions; region encoding for the genes for complement components Bf, C2, C4A, and C4B; and the HLA-D region. The D region consists of a cluster of related subregions, including HLA-DR, DQ, DO, DZ and DP.

If a child fails to respond to conservative measures, the second step of treatment in polyarticular JRA or severe pauciarticular JRA is the use of intramuscular gold salts. Initially this form of therapy requires weekly monitoring of complete blood counts for anemia, leukopenia or thrombocytopenia, and monitoring of urine for proteinuria. The child is questioned and examined for skin rashes and oral ulcerations prior to each gold injection. Fifty to 75% of children will respond to intramuscular gold injections.[7] At the present time, oral gold agents have not been approved for use in children; furthermore, in controlled clinical trials the oral drugs appear to be less effective than intramuscular gold therapy,[8] which remains the mainstay of gold therapy. Corticosteroids should be avoided, but may be required to control the extra-articular manifestations of systemic onset JRA, such as fever, anemia, pericarditis or hepatomegaly. Corticosteroids are administered at the lowest effective dose, as they often cause severe growth retardation and other adverse side effects. Alternate-day steroid therapy appears to cause less severe growth retardation than daily therapy, so this type of dosage schedule is used whenever possible.[9]

A small percentage of children will fail to respond to these measures, and other drugs will be required to control their disease. Children who do not respond to gold therapy, particularly those with polyarticular JRA, can be given a trial of therapy with hydroxychloroquine (Plaquenil) or sulfasalazine (Azulfidine). Therapy with methotrexate, azathioprine or other similar agents is usually reserved for the most severe cases of JRA, due to the higher risk of toxicity.[10, 11] It should be noted that these forms of treatment have not been approved by the FDA for use in children.

With as many as a quarter of a million individuals in the United States afflicted with JRA, effective therapy of this disease remains a challenge for all practitioners. Early recognition of JRA by knowledgeable primary care practitioners is important, because appropriate treatment of JRA can alter both the physical and psychological outcome of this disease. Finally, we are optimistic that future research into the pathogenesis of JRA will ultimately lead to advances in diagnosis and treatment. Genetic studies examining the molecular basis of HLA associated disease susceptibility genes may lead to identification of individuals who are at greatest risk for developing JRA, and provide further insights into the pathogenesis of the disease and its complications.

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Certificates of birth and death revised

January 1, 1989 will mark the beginning of a significant change in the filing of birth and death certificates in Missouri.

Every ten years both birth and death certificates are revised and changes are made to reflect the nature and needs of our population. The health information requested is vital in order for both state health departments and the physicians to best serve the needs of our citizens. Your continued help and support is needed in order for us to meet those needs.

Around December 1, 1988 Missouri physicians will be receiving a copy of the newly revised 1989 Missouri Standard Certificate of Birth and Report of Fetal Death together with a Hospitals' and Physicians' Handbook on Birth Registration and Fetal Death Reporting. All events that occur until midnight, December 31, 1988 must be recorded on current certificates/report. In order to accommodate the physical storage of these records, microfilming, keypunching and use of newly-developed computer programs and software, all events occurring after this time must be recorded on the 1989 revised forms. Those that are not will be returned. All outdated forms and handbooks should be destroyed once 1988 records are completed.

The Missouri certificate is based upon the Model Standard Certificate recommended by the National Center for Health Statistics (NCHS). Section 193.075.1 RSMo (1986) requires that the "forms . . . shall include as a minimum the items recommended by the Federal agency responsible for national vital statistics."

The evaluation to prepare the 1989 certificates proceeded in much the same way as the 1978 evaluation. NCHS appointed a panel of experts to assist in the evaluation. The consultants were state vital registration and statistics executives, representatives of those who complete the documents, and persons who utilize the data derived from the documents.

A look at the changes in the certificates appears on page 805. For more information, contact the Missouri Department of Health, P.O. Box 570, Jefferson City, MO 65102, or call 314/751-6400. ■

Report of Fetal Death

MEDICAL AND HEALTH INFORMATION

35 MEDICAL RISK FACTORS FOR THIS PREGNANCY *(Check all that apply)*

01 ☐ Anemia (Hct. < 30/Hgb < 10)
02 ☐ Cardiac disease
03 ☐ Acute or chronic lung disease
04 ☐ Diabetes (insulin dependent)
05 ☐ Diabetes (other diabetes)
06 ☐ Genital herpes
07 ☐ Hydramnios/Oligohydramnios
08 ☐ Hemoglobinopathy
09 ☐ Hypertension, chronic
10 ☐ Hypertension, pregnancy-induced (pre-eclampsia)
11 ☐ Eclampsia
12 ☐ Incompetent cervix
13 ☐ Previous infant 4000+ grams
14 ☐ Previous preterm or small-for-gestational-age infant
15 ☐ Renal disease
16 ☐ Rh sensitization
17 ☐ Uterine bleeding
00 ☐ None
18 ☐ Other ____________ *(Specify)*

36 OTHER RISK FACTORS FOR THIS PREGNANCY *(Complete all items)*

36a Tobacco use during pregnancy
Yes ☐ No ☐
Average number of cigarettes per day ____________

36b Alcohol use during pregnancy
Yes ☐ No ☐
Average number of drinks per week ____________

36c Mother's height ____________

36d Mother's weight before preg ____________

36e Weight gained during preg ____________

37. OBSTETRIC PROCEDURES *(Check all that apply)*

01 ☐ Amniocentesis
02 ☐ Electronic fetal monitoring
03 ☐ Induction of labor
04 ☐ Stimulation of labor
05 ☐ Tocolysis
06 ☐ Ultrasound
07 ☐ Chorionic villus sampling (CVS)
00 ☐ None
08 ☐ Other ____________ *(Specify)*

38 COMPLICATIONS OF LABOR AND/OR DELIVERY *(Check all that apply)*

01 ☐ Febrile (> 100°F or 38°C)
02 ☐ Meconium, moderate/heavy
03 ☐ Premature rupture of membrane (> 12 hours)
04 ☐ Abruptio placenta
05 ☐ Placenta previa
06 ☐ Other excessive bleeding
07 ☐ Seizures during labor
08 ☐ Precipitous labor (< 3 hours)
09 ☐ Prolonged labor (> 20 hours)
10 ☐ Dysfunctional labor
11 ☐ Breech
12 ☐ Other Malpresentation
13 ☐ Cephalopelvic disproportion
14 ☐ Cord Prolapse
15 ☐ Anesthetic complications
16 ☐ Fetal distress
00 ☐ None
17 ☐ Other ____________ *(Specify)*

39 METHOD OF DELIVERY *(Check all that apply)*

01 ☐ Vaginal
02 ☐ Vaginal birth after previous C-Section
03 ☐ Primary elective C-Section
04 ☐ Primary emergency C-Section
05 ☐ Repeat C-Section
06 ☐ Outlet or low forceps
07 ☐ Mid or high forceps
08 ☐ Vacuum extraction
09 ☐ Hysterotomy/hysterectomy

40. CONGENITAL ANOMALIES OF CHILD *(Check all that apply)*

01 ☐ Anencephalus
02 ☐ Spina bifida/Meningocele
03 ☐ Hydrocephalus
04 ☐ Microcephalus
05 ☐ Other central nervous system anomalies
Specify ____________
06 ☐ Heart malformations
07 ☐ Other circulatory/respiratory anomalies
Specify ____________
08 ☐ Rectal atresia/stenosis
09 ☐ Tracheo-esophageal fistula/esophageal atresia
10 ☐ Omphalocele/Gastroschisis
11 ☐ Other gastrointestinal anomalies
Specify: ____________
12 ☐ Malformed genitalia
13 ☐ Renal agenesis
14 ☐ Other urogenital anomalies
Specify ____________
15 ☐ Cleft lip/palate
16 ☐ Polydactyly/Syndactyly/Adactyly
17 ☐ Club foot
18 ☐ Diaphragmatic hernia
19 ☐ Other musculoskeletal/integumental anomalies
Specify ____________
20 ☐ Down Syndrome
21 ☐ Other chromosomal anomalies
Specify ____________
00 ☐ None
22 ☐ Other ____________ *(Specify)*

Certificate of birth

MEDICAL AND HEALTH INFORMATION

41 MOTHER'S BLOOD TESTED FOR SYPHILIS?

Yes ☐ No ☐

Date Made.

42. PROPHYLACTIC DRUG USED IN BABY'S EYES?

Yes ☐ No ☐

Name of Drug:

43. MEDICAL RISK FACTORS FOR THIS PREGNANCY *(Check all that apply)*

01 ☐ Anemia (Hct. < 30/Hgb. < 10)
02 ☐ Cardiac disease
03 ☐ Acute or chronic lung disease
04 ☐ Diabetes (insulin dependent)
05 ☐ Diabetes (other diabetes)
06 ☐ Genital herpes
07 ☐ Hydramnios/Oligohydramnios
08 ☐ Hemoglobinopathy
09 ☐ Hypertension, chronic
10 ☐ Hypertension, pregnancy-induced (pre-eclampsia)
11 ☐ Eclampsia
12 ☐ Incompetent cervix
13 ☐ Previous infant 4000+ grams
14 ☐ Previous preterm or small-for-gestational-age infant
15 ☐ Renal disease
16 ☐ Rh sensitization
17 ☐ Uterine bleeding
00 ☐ None
18 ☐ Other ____________ *(Specify)*

44. OBSTETRIC PROCEDURES *(Check all that apply)*

01 ☐ Amniocentesis
02 ☐ Electronic fetal monitoring
03 ☐ Induction of labor
04 ☐ Stimulation of labor
05 ☐ Tocolysis
06 ☐ Ultrasound
07 ☐ Chorionic villus sampling (CVS)
00 ☐ None
08 ☐ Other ____________ *(Specify)*

45. COMPLICATIONS OF LABOR AND/OR DELIVERY *(Check all that apply)*

01 ☐ Febrile (> 100°F. or 38°C)
02 ☐ Meconium, moderate/heavy
03 ☐ Premature rupture of membrane (> 12 hours)
04 ☐ Abruptio placenta
05 ☐ Placenta previa
06 ☐ Other excessive bleeding
07 ☐ Seizures during labor
08 ☐ Precipitous labor (< 3 hours)
09 ☐ Prolonged labor (> 20 hours)
10 ☐ Dysfunctional labor
11 ☐ Breech
12 ☐ Other Malpresentation
13 ☐ Cephalopelvic disproportion
14 ☐ Cord Prolapse
15 ☐ Anesthetic complications
16 ☐ Fetal distress
00 ☐ None
17 ☐ Other ____________ *(Specify)*

46. METHOD OF DELIVERY *(Check all that apply)*

01 ☐ Vaginal
02 ☐ Vaginal birth after previous C-Section
03 ☐ Primary elective C-Section
04 ☐ Primary emergency C-Section
05 ☐ Repeat C-Section
06 ☐ Outlet or low forceps
07 ☐ Mid or high forceps
08 ☐ Vacuum extraction

47. ABNORMAL CONDITIONS OF THE NEWBORN *(Check all that apply)*

01 ☐ Anemia (Hct. < 39/Hgb. < 13)
02 ☐ Birth injury
03 ☐ Fetal alcohol syndrome
04 ☐ Hyaline membrane disease/RDS
05 ☐ Meconium aspiration syndrome
06 ☐ Assisted ventilation < 30 min.
07 ☐ Assisted ventilation ≥ 30 min.
08 ☐ Seizures
00 ☐ None
09 ☐ Other ____________ *(Specify)*

48. CONGENITAL ANOMALIES OF CHILD *(Check all that apply)*

01 ☐ Anencephalus
02 ☐ Spina bifida/Meningocele
03 ☐ Hydrocephalus
04 ☐ Microcephalus
05 ☐ Other central nervous system anomalies
Specify: ____________
06 ☐ Heart malformations
07 ☐ Other circulatory/respiratory anomalies
Specify: ____________
08 ☐ Rectal atresia/stenosis
09 ☐ Tracheo-esophageal fistula/esophageal atresia
10 ☐ Omphalocele/Gastroschisis
11 ☐ Other gastrointestinal anomalies
Specify: ____________
12 ☐ Malformed genitalia
13 ☐ Renal agenesis
14 ☐ Other urogenital anomalies
Specify: ____________
15 ☐ Cleft lip/palate
16 ☐ Polydactyly/Syndactyly/Adactyly
17 ☐ Club foot
18 ☐ Diaphragmatic hernia
19 ☐ Other musculoskeletal/integumental anomalies
Specify: ____________
20 ☐ Down Syndrome
21 ☐ Other chromosomal anomalies
Specify ____________
00 ☐ None
22 ☐ Other ____________ *(Specify)*

Certificate of birth revised

Proposed Changes in the MSMA Constitution and Bylaws

The Council of the Missouri State Medical Association last year approved changes in the Association's "Purpose" as recommended by the Strategic Planning Committee. These changes were presented to the House of Delegates in the form of revisions to the MSMA Constitution and Bylaws at the 1988 Annual Convention for final vote at the 1989 Annual Convention.

According to MSMA procedures, the proposed changes must also be published in *Missouri Medicine* or sent to component societies. Reprinted below are the changes which will be voted upon at the 1989 Annual Convention. (Bracketed material deleted; underlined words added.)

Constitutional changes

Article II. [Purpose] Mission

[The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining purposes, and by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.]

The Mission of the Missouri State Medical Association is to serve its members through promotion of the science and art of medicine, protection of the health of the public, and betterment of the medical profession in Missouri.

Also, Chapter XVI of the Bylaws would be changed as follows (Bracketed material deleted; underlined words added):

Chapter XVI [Purpose] Mission

[The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, the organization of its membership for negotiation and collective bargaining-purposes, and by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.]

The Mission of the Missouri State Medical Association is to serve its members through promotion of the science and art of medicine, protection of the health of the public, and betterment of the medical profession in Missouri.

In addition, at the May meeting of the Council, it was voted to submit to the House a proposed Bylaws revision to change the name of the Committee on Physician Rehabilitation to the Physicians Health Committee. The following change is submitted for consideration by the House (bracketed material deleted; underlined words added):

Chapter VII. Committees and Commissions

Section 1. Standing Committees of the Missouri State Medical Association, the chairmen of which shall be appointed by the Association President unless otherwise provided in these Bylaws, will be as follows:

Executive Committee.
Committee on Constitution and Bylaws.
Committee on Publication.
Committee on Legislative Affairs.
Committee on Planning.
[Committee on Physician Rehabilitation.]
Physicians Health Committee.

The [Committee on Physician Rehabilitation] Physicians Health Committee shall consist of members of the Association appointed by the President for a term of three years. The [Committee on Physician Rehabilitation] Physicians Health Committee shall plan and execute programs of professional assistance for members of this Association who may require assistance to continue or return to their professional activities.

Physician's Recognition Awards

Forty MSMA members qualified for the MSMA-AMA Physician's Recognition Award during October 1988.

The award, presented by the Missouri State Medical Association and the American Medical Association, is given to those physicians who voluntarily complete 150 credit hours of continuing medical education within a three-year period. Sixty of the credit hours must be earned in Category I programs.

Buchanan

Carleton H. Lee, *St.Joseph*
Prakashchandra B. Patel, *St. Joseph*
Robert E. Remis, *St. Joseph*

Butler-Wayne-Ripley-Carter

Robert L. Dever, *Poplar Bluff*

Cole

Kenneth K. C. Siu, *Jefferson City*

Greene

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Jeffrey A. Waters, *Kansas City*

Mid-Missouri

Eugene F. White, *Rolla*

Ozarks

W. Joe Farley, *Neosho*

Saline

Kenneth Y. Baik, *Marshall*

St. Charles-Lincoln

Victor G. Clever, *St. Charles*
John J. Mentel, *St. Peters*

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Dixie Anderson, *St. Louis*
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James W. Fleshman, *St. Louis*
Samuel B. Guze, *St. Louis*
David S. Martin, *St. Louis*
David M. Near, *St. Louis*
Jo-Ellyn M. Ryall, *St. Louis*
Houshang Vafi, *St. Louis*

South Central

Tiong Tio, *West Plains*

New Members

■ **George A. Aldridge, M.D.,** 1901 Sunset, Poplar Bluff 63901, has become a member of the Butler-Wayne-Ripley-Carter County Medical Society. Dr. Aldridge received his preliminary education at Trinity University and obtained his medical degree at Tulane University in 1963. He completed his residency at the V.A. Hospital, New Orleans, LA. Dr. Aldridge specializes in urology.

■ **Stanley I. Biel, M.D.,** 12255 DePaul Drive, Suite 865, Bridgeton 63044, has become a member of the St. Louis Metropolitan Medical Society. Dr. Biel obtained his medical degree at the University of Illinois in 1978. He completed his residency at Jewish Hospital, St. Louis, MO. Dr. Biel specializes in cardiovascular diseases.

■ **Kirk E. Brockman, M.D.,** 370 N. Commercial, St. Clair 63077, has become a member of the Franklin-Gasconade-Warren County Medical Society. Dr. Brockman received his preliminary education at St. Mary's University and obtained his medical degree at the University of Texas Southwestern Medical Center in 1983. He completed his residency at St. John's Mercy Medical Center, St. Louis, MO. Dr. Brockman specializes in family practice.

■ **Robert J. Brown, M.D.,** 2730 Highway 94 South, St. Charles 63303, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Brown received his preliminary education at St. Peter's College and obtained his medical degree at the Washington University School of Medicine in 1983. He completed his residency at St. John's Mercy Medical Center, St. Louis, MO. Dr. Brown specializes in obstetrics/gynecology.

■ **Ellen L. Bruno, M.D.,** 1506 E. Broadway, Columbia 65201, has become a member of the Boone County Medical Society. Dr. Bruno received her preliminary education at the University of Missouri-Columbia and obtained her medical degree at the University of Missouri-Columbia School of Medicine in 1985. She completed her residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Bruno specializes in family medicine.

■ **Patrick R. Conner, M.D.,** 800 N. Lindbergh, Creve Couer 63167, has become a member of the St. Louis Metropolitan Medical Society. Dr. Conner obtained his medical degree at Duke University in 1977. He completed his residency at the University of Alabama, Birmingham, AL. Dr. Conner specializes in internal medicine.

■ **Charles L. Crist, M.D.,** #60 Doctor's Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Crist received his preliminary education at the University of Missouri-Kansas City and obtained his medical degree at UMKC in 1982. He completed his residency at St. John's Mercy Medical Center, St. Louis, MO. Dr. Crist specializes in family practice.

■ **Raymond P. Davidson, M.D.,** 4444 Forest Park Blvd., RM 697, St. Louis 63108, has become a member of the St. Louis Metropolitan Medical Society. Dr. Davidson obtained his medical degree at the Washington University School of Medicine in 1978. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Davidson specializes in obstetrics/gynecology.

■ **Bruce F. Dennison, M.D.,** 2503 Lucy Lee Parkway, Poplar Bluff 63901, has become a member of the Butler-Wayne-Ripley-Carter County Medical Society. Dr. Dennison received his preliminary education at the University of Wisconsin and obtained his medical degree at the Medical College of Wisconsin in 1981. He completed his residency at the Medical College of Wisconsin, Milwaukee, WI. Dr. Dennison specializes in otolaryngology.

■ **Michael N. Erie, M.D.,** 2 Westbury, St. Charles 63033, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Erie received his preliminary education at Pacific Lutheran University and obtained his medical degree at New York Medical College in 1982. He completed his residency at St. Francis Medical Center, Peoria, IL. Dr. Erie specializes in general surgery.

■ **Richard A. Geisman, M.D.,** #70 Jungermann Circle, Suite 200, St. Peters 63376, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Geisman received his preliminary education at St. Louis University and obtained his medical degree at Tulane University School of Medicine in 1983. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Geisman specializes in gastroenterology.

■ **Robert J. Gile, M.D.,** #37 Doctor's Park, Cape Girardeau 63701, has become a member of the Cape Girardeau County Medical Society. Dr. Gile received his preliminary education at the University of South Dakota and obtained his medical degree at Ohio State University School of Medicine in 1983. He completed his residency at the Medical College of Ohio, Toledo, OH. Dr. Gile specializes in anesthesia.

■ **Nilakshi Gupta, M.D.,** N314 Health Sciences Center, UMC, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Gupta received her preliminary education at Gannon University and obtained her medical degree at Hahnemann University School of Medicine in 1982. She completed her residency at the University of Pittsburgh Health Center Hospitals, Pittsburgh, PA. Dr. Gupta specializes in anesthesia.

■ **Stephen L. Hawkins, M.D.,** 526 Spruce, Cabool 65689, has become a member of the South Central County Medical Society. Dr. Hawkins received his preliminary education at the University of Tennessee and obtained his medical degree at the University of Tennessee Center for the Health Sciences in 1985. He completed his residency at the Anniston Family Practice Program, Anniston, AL. Dr. Hawkins specializes in family practice.

■ **J. Marcus Heim, D.O.,** Rt. 1, Box 27A, Osage Beach 65065, has become a member of the Lake of the Ozarks County Medical Society. Dr. Heim received his preliminary education at Oklahoma City University and obtained his osteopathic degree at the Oklahoma College of Osteopathic Medicine and Surgery in 1982. He completed his residency at Normandy Osteopathic Hospitals, St. Louis, MO. Dr. Heim specializes in orthopaedic surgery.

■ **Anthony C. Hooper, M.D.,** 4350 Bridgeland Drive, Suite C, Bridgeton 63044, has become a member of the St. Louis Metropolitan Medical Society. Dr. Hooper obtained his medical degree at the University of Arkansas School of Medicine in 1971. He completed his residency at Maricopa County General Hospital, Phoenix, AZ. Dr. Hooper specializes in diagnostic radiology.

■ **Paul W. Kampfe, M.D.,** 2850 West Clay, St. Charles 63301, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Kampfe received his preliminary education at St. Olaf University and obtained his medical degree at the University of Nebraska Medical Center in 1980. He completed his residency at the University of Nebraska, Omaha, NE. Dr. Kampfe specializes in general surgery.

■ **Henry J. Kaplan, M.D.,** 660 South Euclid Ave., Box 8096, St. Louis 63110, has become a member of the St. Louis Metropolitan Medical Society. Dr. Kaplan obtained his medical degree at Cornell Medical School in 1968. He completed his residency at the University of Iowa Hospitals, Iowa City, Iowa. Dr. Kaplan specializes in ophthalmology.

■ **William H. Lauderdale, M.D.,** P.O. Box 10, Hwy. Y, Forsyth 65653, has become a member of the Tri-Lakes County Medical Society. Dr. Lauderdale received his preliminary education at Baylor University and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1963. He completed his residency at the Unviersity of Missouri School of Medicine, Columbia, MO. Dr. Lauderdale specializes in internal medicine and nephrology.

■ **Ernest Levenson, M.D.,** 1901 Sunset Drive, Poplar Bluff 63901, has become a member of the Butler-Wayne-Ripley-Carter County Medical Society. Dr. Levenson received his preliminary education at Brooklyn College and obtained his medical degree at the S.U.N.Y. Downstate Medical Center in 1964. He completed his residency at the Marquette Affiliated Program. Dr. Levenson specializes in ophthalmology.

■ **Ina Levenson, M.D.,** 1901 Sunset, Poplar Bluff 63901, has become a member of the Butler-Wayne-Ripley-Carter County Medical Society. Dr. Levenson received her preliminary education at Washington Square College and obtained her medical degree at the S.U.N.Y. Downstate Medical Center in 1964. She completed her residency at the Marquette Affiliated Program. Dr. Levenson specializes in dermatology.

■ **Timothy D. Lischwe, M.D.,** P.O. Box 187 CB, Osage Beach 65065, has become a member of the Lake of the Ozarks County Medical Society. Dr. Lischwe received his preliminary education at Knox College and obtained his medical degree at the University of Illinois in 1984. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Lischwe specializes in ophthalmology.

■ **Corey S. Maas, M.D.,** 1325 S. Grand, St. Louis 63112, has become a member of the St. Louis Metropolitan Medical Society. Dr. Maas obtained his medical degree at the University of Florida College of Medicine in 1986. He is completing his residency at St. Louis University Medical Center, St. Louis, MO. Dr. Maas specializes in otolaryngology.

■ **John D. Marcum, M.D.,** 1020 St. Clair Plaza, St. Clair 63077, has become a member of the Franklin-Gasconade-Warren County Medical Society. Dr. Marcum received his preliminary education at the University of Louisville and obtained his medical degree at the Louisville School of Medicine in 1975. He completed his residency at the University of Kansas School of Medicine, Wichita, KS. Dr. Marcum specializes in general practice.

■ **Michael M. Marushack, M.D.,** 12379 I Cross Creek Cove, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Marushack obtained his medical degree at the University of Utah in 1986. He completed his residency at Barnes Hospital, St. Louis, MO. Dr. Marushack specializes in orthopaedic surgery.

■ **Thomas D. Matthews, M.D.,** 800 E. 5th Street, Suite 202, Washington 63090, has become a member of the Franklin-Gasconade-Warren County Medical Society. Dr. Matthews obtained his medical degree at the University of Oklahoma in 1983. He completed his residency at the St. Louis University Medical Center, St. Louis, MO. Dr. Matthews specializes in orthopaedic surgery.

■ **Fallon H. Maylack, M.D.,** 12255 DePaul Drive, Suite 250, Bridgeton 63044, has become a member of the St. Louis Metropolitan Medical Society. Dr. Maylack obtained his medical degree at Washington University School of Medicine in 1982. He completed his residency at Washington University, St. Louis, MO. Dr. Maylack specializes in orthopaedic surgery.

■ **Daniel J. McGuire, M.D.,** 4949 Barnes Hospital Plaza, Suite 11300 W. Pavilion, St. Louis 63146, has become a member of the St. Louis Metropolitan Medical Society. Dr. McGuire obtained his medical degree at Creighton University in 1982. He completed his residency at St. Louis University Hospital, St. Louis, MO. Dr. McGuire specializes in orthopaedic surgery.

■ **Paul E. Miller, M.D.,** 10010 Kennerly Road, St. Louis 63131, has become a member of the St. Louis Metropolitan Medical Society. Dr. Miller obtained his medical degree at the University of Texas Health Science Center in 1985. He completed his residency at Parkland Memorial Hospital, Dallas, TX. Dr. Miller specializes in internal medicine.

■ **Andrew T. Pickens, M.D.,** 1027 Bellevue, St. Louis 63117, has become a member of the St. Louis Metropolitan Medical Society. Dr. Pickens obtained his medical degree at the St. Louis University School of Medicine in 1969. He completed his residency at St. Louis University, St. Louis, MO. Dr. Pickens specializes in psychiatry.

■ **Terry B. Ponder, M.D.,** 10 Oak Tree Village, Doniphan 63935, has become a member of the Butler-Wayne-Ripley-Carter County Medical Society. Dr. Ponder received his preliminary education at Southeast Missouri State University and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1985. He completed his residency at Area Health Education Center, South Arkansas. Dr. Ponder specializes in family practice.

■ **Tyrun K. Richardson, M.D.,** 116 First Capitol Drive, St. Charles 63301, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Richardson received his preliminary education at the University of Oklahoma and obtained his medical degree at the University of Kansas Medical School in 1983. He completed his residency at the St. Louis University Hospitals, St. Louis, MO. Dr. Richardson specializes in urology.

■ **Debra D. Rosenthal, M.D.,** 615 S. New Ballas Road, St. Louis 63141, has become a member of the St. Louis Metropolitan Medical Society. Dr. Rosenthal obtained her medical degree at the University of California-San Francisco in 1983. She completed her residency at Mallinckrodt Institute of Radiology, St. Louis, MO. Dr. Rosenthal specializes in radiology.

■ **Martin Rudloff, M.D.,** 800 E. 5th Street, #304, Washington 63090, has become a member of the Franklin-Gasconade-Warren County Medical Society. Dr. Rudloff obtained his medical degree at Washington University in 1981. He completed his residency at St. Louis Children's Hospital, St. Louis, MO. Dr. Rudloff specializes in pediatrics.

- **Evelyne G. Schuetz, M.D.,** 1301 Boonslick, St. Charles 63301, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Schuetz received her preliminary education at St. Louis University and obtained her medical degree at the St. Louis University School of Medicine in 1984. She completed her residency at Foster G. McGaw Hospital, Maywood, IL. Dr. Schuetz specializes in obstetrics/gynecology.

- **Thomas M. Siler, M.D.,** 115 First Capitol Drive, St. Charles 63301, has become a member of the St. Charles-Lincoln County Medical Society. Dr. Siler received his preliminary education at the University of Kansas and obtained his medical degree at the University of Kansas School of Medicine in 1981. He completed his residency at the University of Kansas, Kansas City, KS. Dr. Siler specializes in pulmonary diseases, internal medicine.

- **Catherine M. Van Voorn, M.D.,** 203 W. Broadway, Columbia 65203, has become a member of the Boone County Medical Society. Dr. Van Voorn received her preliminary education at the University of Missouri-Columbia and obtained her medical degree at the University of Missouri-Columbia School of Medicine in 1981. She completed her residency at the Veterans Administration Hospital, Columbia, MO. Dr. Van Voorn specializes in internal medicine.

- **Dane M. Wicks, M.D.,** Student Health Center, UMC, Columbia 65211, has become a member of the Boone County Medical Society. Dr. Wicks received her preliminary education at the University of New Mexico and obtained her medical degree at the University of New Mexico School of Medicine in 1981. She completed her residency at the University of Missouri Department of Family Medicine, Columbia, MO. Dr. Wicks specializes in family practice.

- **Eugene R. Worth, M.D.,** N314 Health Sciences Center, UMC, Columbia 65212, has become a member of the Boone County Medical Society. Dr. Worth received his preliminary education at the University of Missouri-Columbia and obtained his medical degree at the University of Missouri-Columbia School of Medicine in 1979. He completed his residency at the University of Missouri Hospital and Clinics, Columbia, MO. Dr. Worth specializes in anesthesiology.

- **Kong-Woo P. Yoon, M.D.,** 1325 S. Grand, St. Louis 63104, has become a member of the St. Louis Metropolitan Medical Society. Dr. Yoon received his preliminary education at St. Louis University and obtained his medical degree at St. Louis University School of Medicine in 1981. He completed his residency at St. Louis University Hospital, St. Louis, MO. Dr. Yoon specializes in neurosurgery.

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ARMY RESERVE MEDICAL PROFILE NO.7

Soldier being examined for effects of high-altitude cerebral edema.

ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow, Massachusetts General Hospital, Boston, Massachusetts. Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude); Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neurosurgery Research Fellowship Training, National Institutes of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial Fellowship, National Masonic Medical Research Foundation; Albert Schweitzer Fellowship, International Albert Schweitzer Foundation; Harvard Medical School Cabot Prize for Best Senior Thesis; recently published article, "Who Shall Live and Who Shall Die" in Newsweek Magazine.

"The work I'm doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn't ask for a smoother transition. And that's true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

"Some of the projects the Army is undertaking are on the cutting edge of research. For example, I'm currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

"The quality of medicine and the caliber of people I've been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I'm giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General."

Find out more about the medical opportunities in the Army Reserve. Call toll free 1-800-USA-ARMY.

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Summary.
Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae, Haemophilus influenzae,* and *Streptococcus pyogenes* (group A β-hemolytic streptococci).
Contraindication: Known allergy to cephalosporins.
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever) 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%, genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061088L]

Additional information available from Eli Lilly and Company, Indianapolis, Indiana 46285. PV 2351 AMP

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In Memoriam

■ **Robert E. Bruner, M.D.,** died October 6, 1988 at the age of 78. Dr. Bruner, a child neurologist and long-time Kansas City physician, founded the Harry S. Truman Children's Neurological Center in 1949. He and his wife were the center's first directors. A cerebral palsy specialist, he also established the Kansas City chapter of the United Cerebral Palsy Association and was its medical director in the early 1950s. He obtained his medical degree at the Northwestern University Medical School in 1938. Dr. Bruner was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Vincent J. LoPiccolo, Sr., M.D.,** died October 22, 1988 at the age of 81. Dr. LoPiccolo, an internist, was a member of the faculty at St. Louis University and was director of student health services at the school. He practiced medicine in St. Louis for 50 years. He obtained his medical degree at the St. Louis University Medical School in 1930. Dr. LoPiccolo was a member of the St. Louis Metropolitan Medical Society.

■ **Robert C. McClanahan, M.D.,** died October 12, 1988 at the age of 86. Dr. McClanahan, an internist, practiced medicine in Kansas City for more than 50 years before retiring in 1982. He was a member and former president of the medical staff at Research Medical Center. He received a bachelor's degree from the University of Missouri-Columbia and obtained his medical degree at the Northwestern University School of Medicine in 1929. He was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **E. Lee McCorkle, M.D.,** died September 23, 1988 at the age of 72. Dr. McCorkle, a general practitioner, practiced medicine in Marshall for many years. He obtained his medical degree at the Washington University School of Medicine in 1942. Dr. McCorkle was a member of the Saline County Medical Society.

■ **Paul T. McGannon, Sr., M.D.,** died October 1, 1988 at the age of 62. Dr. McGannon, a general surgeon, practiced medicine at St. Joseph Health Center for more than 30 years and at Research Medical Center, where he had been chief of surgery, for more than 20 years. He also practiced at Baptist Medical Center for more than five years before he retired in 1986. He was a team physician for Rockhurst High School from 1961 to 1986 and was inducted into the Missouri Sports Medicine Hall of Fame in 1987. He received a bachelor's degree in 1948 from Rockhurst College and obtained his medical degree at the St. Louis University School of Medicine in 1952. Dr. McGannon was a member of the Metropolitan Medical Society of Greater Kansas City.

■ **Alva Moore, M.D.,** died August 2, 1988 at the age of 80. Dr. Moore, an internist, practiced medicine in St. Louis for more than 40 years. He obtained his medical degree at the Meharry Medical College School of Medicine in 1937. Dr. Moore was a member of the St. Louis Metropolitan Medical Society.

■ **John W. Williams, M.D.,** died September 11, 1988 at the age of 78. Dr. Williams, an occupational medicine specialist, practiced medicine in Oak Grove for many years. He obtained his medical degree at the Washington University School of Medicine in 1935. Dr. Williams was a member of the Lafayette-Ray County Medical Society.

Medical School News

University of Missouri-Kansas City

- **Stuart Munro, M.D.,** assistant dean for Year-1 and -2 Medicine and assistant professor of Psychiatry is the 1988 recipient of the School's Excellence in Medical Education Award. Dean **James J. Mongan, M.D.,** presented the award at the School's convocation ceremony in October. About 400 people attended the annual event at which provost emeritus **E. Grey Dimond, M.D.,** was keynote speaker with the topic, "How to Grow and Thrive in the Medical School Garden." Additionally, second-year student **Betsy Mullans** was presented with the Richard T. Garcia Memorial Award. The award goes to a student who exhibits high academic performance, empathy and support of his or her fellow students.

- The Alex Sonnenwirth, M.D., Memorial Faculty Research Award went to help further Doppler research in maternal-fetal circulation, which has already achieved international recognition at the School of Medicine and Truman Medical Center. The $2,500 research award, which is sponsored by the St. Louis Friends of UMKC School of Medicine, will be used for the study, "Doppler Velocimetry and Waveform Analysis of Fetal Hemodynamic Changes During Asphyxia." Collaborators on the project are **Dev Maulik, M.D., Ph.D., Prasad Yarlagadda, Ph.D.,** and **Gregory J. Downing, D.O.** Dr. Alex Sonnenwirth was an early president of the St. Louis Friends group. A distinguished St. Louis bacteriologist, he was a strong supporter of the School of Medicine from its early days.

- **Charles Hatem, M.D.,** in October visited the School of Medicine and Truman Medical Center as the Department of Medicine's second annual William H. Goodson Jr., M.D., Visiting Professor. Dr. Hatem is director of Medical Education and Associate Chief of Medicine at Mt. Auburn Hospital in Cambridge, Mass. His topic was, "The 'Cannot Miss' Diagnoses in Primary Care." Dr. William Goodson devoted his life to the field of primary-care medicine. He was a consultant at the arthritis clinic at Kansas City's old General Hospital and a docent at the medical school. "He had a continuing interest in medical education and represented, in every way, a model for our graduates to emulate," commented **James J. Mongan, M.D.,** Medical School dean.

- **James Youngblood, M.D.,** professor and chairman of the Department of Obstetrics and Gynecology, was elected to a three-year term as vice chairman of the South Central District of the American College of Obstetricians and Gynecologists.

- **Dev Maulik, M.D., Ph.D.,** this year was named a fellow of the Royal College of Obstetricians and Gynecologists, in addition to making two fall presentations. In September, he spoke at a meeting of the Central Association of Obstetricians and Gynecologists in Salt Lake City on the topic, "Components of Variability of Umbilical Arterial Doppler Velocimetry — A Prospective Analysis." In October, he was moderator of a Doppler workshop at the Rochester Trophoblast Conference, which was held in Rochester, N.Y., in conjunction with the European Placenta Group.

- **Richardson K. Noback, M.D.,** made a presentation in October on "Priorities and Propriety: Social, Economic, Functional, and Medical Problems Among the Elderly," at the National Federation of Catholic Physicians annual meeting in Kansas City.

- **Edward L. Mosby, D.D.S.,** associate professor and vice chairman of the Department of Hospital Dentistry and associate professor of Oral and Maxillofacial Surgery Graduate Training, recently was elected as a fellow of the American College of Dentists.

- A University of Missouri-Kansas City professor will continue his studies of viruses with the help of a grant from the National Institutes of Health. **George J. Thomas Jr.** recently received a new $669,956 grant to study "Molecular Structure and Interactions of Viruses."

  Thomas is a professor of basic life sciences and head of the cell biology and biophysics division at UMKC.

  The five-year research project is designed to determine how viruses that infect man, animals and plants become organized or disorganized, and become capable of attacking organisms or being disarmed.

  Thomas was recently selected as a University of Missouri Curators' Professor, which is the highest honor the curators can bestow on a faculty member.

Washington University

- Researchers at Washington University School of Medicine in St. Louis need volunteers for a study of depression and dementia in the elderly.

  The study, directed by **Eugene H. Rubin, M.D., Ph.D.,** associate professor of psychiatry, is being conducted by the university's Alzheimer's Disease Research Center (ADRC) and the School of Medicine's Memory and Aging Project.

  Washington University's ADRC is one of only ten institutions in the U.S. that has received five-year funding from the National Institute on Aging (NIA) to study Alzheimer's Disease. The center's director, **Leonard Berg, M.D.,** is professor of clinical neurology at the School of Medicine. He is also director of the Memory and Aging Project, a long-term study of intellectual function in people aged 65 and older.

  For more information, call the Memory and Aging Project at 314/362-2683.

- One of the five national centers for research and treatment of ectodermal dysplasia (ED), a rare genetic disease that affects children's teeth and skin, has been established in the division of pediatric dentistry at Washington University Medical Center in St. Louis.

  The center, housed at Children's Hospital, was created through the efforts of the National Foundation for Ectodermal Dysplasias and the School of Dental Medicine. The ED center is headed by **Donald V. Huebener, D.D.S.,** director of the division of pediatric dentistry.

  One in 15,000 people are believed to be affected by ED, a group of closely related diseases. ED occurs during pregnancy because of defects in formation of the ectoderm, the outer layer of tissue that surrounds the developing baby and that contributes to proper growth of many parts of the body.

The most common — and most visible — problem of ED patients is teeth, Huebener says. They generally are missing some or all of their teeth; those that remain are irregular in shape, often pointed, and lack enamel, the protective coating on teeth.

People with ED often have absent or poorly functioning sweat glands. They may also have thin or abnormally textured hair and fair, rash-prone skin. Their bodies underproduce fluids; they tend to have frequent eye infections because of a deficiency in tears, and difficulty swallowing because saliva is sparse. Other complications can include hearing and vision loss, mental retardation, abnormal limbs and cleft palate.

The Washington University center has adopted a multidisciplinary team approach to the diverse problems of children with ED. Patients can be seen by specialists in dermatology, genetics, oral surgery, otolaryngology, pediatrics, pediatric dentistry, plastic surgery and prosthodontics.

The new center provides a central location for diagnosis, treatment and support groups. Research to investigate clinical and basic science problems associated with the disease will be an integral part of the program.

Other ED centers are located at Texas Children's Hospital, affiliated with Baylor University; Alabama Children's Hospital, University of Alabama-Birmingham; Arkansas Children's Hospital, University of Arkansas School of Medicine in Little Rock; and Children's Orthopedic Hospital and Medical Center, University of Washington in Seattle.

For more information about ED, call the center at 314/454-6250.

The University of Missouri-Columbia

- **Javad H. Kashani, M.D.**, professor of psychiatry, has been appointed to the editorial board of the *Journal of the American Academy of Child and Adolescent Psychiatry.*

- **Richard Katnik, M.D., Ph.D.**, associate professor of neurology, in September presented a talk titled "Ferritin Levels in Neurological Disorders" at the National Children's Neurological Meeting in Halifax, Nova Scotia.

- **Ronald McLaughlin, D.V.M.**, assistant professor of microbiology and director of Laboratory Animal Medicine, is president elect of the American Association of Laboratory Animal Science beginning in October. He will assume the presidency of AALAS in October 1989.

- **Marion Minor, P.T., M.S.P.H.**, clinical instructor of medicine and associate director of the Central Missouri Regional Arthritis Center, has been nominated for a member-at-large position to the Governing Board of the Arthritis Health Professions Association. She has been a member of AHPA for 10 years and served on the National Program Committee in 1985-6.

- **Joyce A. Mitchell, Ph.D.**, associate professor of child health and director of the Information Science Group, has been elected to the National Board of Governors for the American Association for Medical Systems and Informatics. Dr. Mitchell also was selected to be the chair of the Biomedical Library Research Committee, the study section of the National Library of Medicine. Her term lasts through June 30, 1989. The committee reviews research grants dealing with computers in medicine and resource grants for medical libraries.

- **Karl Nolph, M.D.**, professor and chief of the division of nephrology, was an invited speaker to the 19th annual meeting of the National Kidney Foundation of Iowa in September in Iowa City. He spoke on current issues in peritoneal dialysis and delivered The Richard L. Lawton Lecture, titled "Treatment of renal failure: Where do we go from here?"

- **C. Lin Puckett, M.D.**, professor and chief of the division of plastic and reconstructive surgery, in October assumed the presidency of the American Association of Hand Surgery. He also was elected secretary of the American Society of Plastic and Reconstructive Surgeons.

- **Gordon Sharp, M.D.**, professor and chief of the division of immunology and rheumatology, has been named the first Michael Einbender Distinguished Professor in Medicine-Rheumatology. The distinguished professorship was established by a gift from Lester and Rhoda Einbender of St. Joseph in memory of their son who died of lupus at age 28. The Einbenders have sponsored an annual lectureship on lupus research at the University since their son's death in 1976, and the new professorship was announced at the 12th annual lecture, Oct. 27.

- **Robert Shaw, M.Ed., R.R.T.**, instructor of respiratory therapy in the School of Health Related Professions, and **Suzanne Burton, M.Ed., R.N.**, quality assurance coordinator at University Hospital and Clinics, have won the Baxter Literary Award for their article "How Our Hospital Established Quality Assurance Guidelines," about respiratory care management. The two received their award from Baxter, a respiratory therapy equipment supplier, at the annual convention of the American Association for Respiratory Care, Nov. 4-8 in Orlando, Fla.

- **Philip C. Anderson, M.D.**, professor and chief of the division of dermatology, was chairman of the Congress on Technology in November in Chicago. The conference dealt with the use of new computer-related equipment in clinical medicine and related medical education.

- **Bernard D. Beitman, M.D.**, associate professor of psychiatry, has been elected to membership in the American College of Psychiatrists. Membership is limited to less than 2 percent of all U.S. psychiatrists and is based on significant scholarly contributions to psychiatry. Dr. Beitman, director of area studies in psychotherapy, is the author of two books and numerous articles on psychotherapy and panic disorder. Dr. Beitman also has been awarded an additional $29,000 by the Upjohn Co. for extra dimensions of his study of the efficacy and safety of Deracyn-SR tablets in panic disorder and agoraphobia. **Imad M. Al-Basha, M.D.**, assistant professor of psychiatry, is co-investigator for the study, which began July 1.

- **Armando R. Favazza, M.D.**, professor and associate chairman of psychiatry, was honored at an American Medical Writers Association awards banquet in October in Philadelphia. The association selected Dr. Favazza's book *Bodies Under Siege* for an Honorable Mention award. **Barbara S. Favazza, M.D.**, clinical associate professor of psychiatry, also worked on the book, which was published last year by Johns Hopkins University Press. Of four books by physicians chosen to receive awards this year, *Bodies Under Siege* is the only one in the field of psychiatry. It deals with self-mutilation, a far more common phenomenon than has previously been acknowledged. Dr. Armando Favazza also has been appointed to the finance and publications committees of the American Association for Social Psychiatry, an organization for which he is also secretary-treasurer elect.

■ **Richard A. Finkelstein, Ph.D.,** Millsap Distinguished Professor and chairman of the Department of Microbiology, presented two papers at the first China-U.S. Infectious Disease Conference in Shanghai at the end of August. He discussed his research on cholera toxin-related enterotoxins, which cause diarrheal diseases in man and other animals. Dr. Finkelstein also discussed his collaborative research with **Mary Boesman-Finkelstein, Ph.D.,** research associate professor, to develop improved infant feeding formulae that will protect Third World children against diarrheal disease, a leading cause of death.

■ **William T. Griffin, M.D.,** professor of obstetrics and gynecology, was named the second David G. Hall Professor in recognition of outstanding service to the profession and OB/GYN department. Dr. Hall, the former chairman of the OB/GYN department, was the first to receive the endowed professorship in his name last year. Colleagues, former students, and former residents contribued money for the Hall Professorship to honor Dr. Hall after he announced his intention to step down from the department chairmanship in December 1987. Dr. Hall retired Oct. 31.

■ **Stephanie Hanson, Ph.D.,** assistant professor of physical medicine and rehabilitation, presented her abstract "Perceived Stress, Health Locus of Control Orientation, and Menstrual Attitude in Women With and Without the Premenstrual Syndrome" at the Third International Congress on Women's Health Issues, Nov. 9-12 in Tampa, Fla.

■ **Judith Taylor, R.T.,** clinical instructor of radiologic science in the School of Health Related Professions, won first place for her technologists essay "Multi-Competent . . . or . . . Medicine Man" for the Missouri Society of Radiologic Technologists. The prize was awarded in October in Columbia during the society's 56th annual conference. **Dana Brant,** a senior from Jefferson City studying radiologic science, also was honored by the society. She received a second-place essay award for her manuscript titled "Mammography, Past, Present and Future."

■ **Zbylut Twardowski, M.D.,** professor of nephrology, gave two presentations on peritoneal dialysis in June in Poland. The first was at the IVth Conference of the Polish Society of Nephrology in Poznan. The second was at the Department of Nephrology, Institute of Internal Medicine, Medical Academy in Lublin.

■ **Joseph Walls, M.D.,** associate professor of surgery; **Jack Curtis, M.D.,** associate professor and chief of the division of cardiothoracic surgery; and **Zuhdi Lababidi, M.D.,** professor of child health, in September presented "Surgical Guidelines for Percutaneous Balloon Pulmonary Valvuloplasty" at the European Association for Cardiothoracic Surgery in Bordeaux, France.

■ **Connie Henke Yarbro, R.N., B.S.N.,** clinical assistant professor of medicine, and **John W. Yarbro, M.D., Ph.D.,** professor of medicine, led the Kenyan-American Cancer Nursing Conference in Kenya in October. The program was designed to allow comparative study between differing health care systems and their various approaches to patient care.

■ The School of Health Related Professions, a school within the School of Medicine, celebrated its 10th anniversary on campus during Homecoming in October. The school, which educates students in the allied health professions, was founded in 1978. HRP Director **Rich Oliver, Ph.D.,** sees several challenges for the school as it moves into its second decade. "We want to keep class size the same and increase our research productivity as we move into the mainstream of academic programs."

■ New officers have been elected to two-year terms to lead the Medical School Foundation, a non-profit corporation that raises money for medical school scholarships, loans and endowments. **Gary Dyer, M.D.,** a dermatologist from St. Joseph, will serve as president; and **William C. Allen, M.D.,** University professor emeritus of family and community medicine, and **Hugh E. Stephenson Jr., M.D.,** the School's interim dean and a professor of surgery, will retain their positions as treasurer and secretary, respectively.

MSMA 131st
Annual Convention
April 13-16, 1989
Marriott Pavilion
St. Louis

■ Editor's Desk

Continued from page 773

"I've had all this training on what to do in situations like this and all my equipment is two miles down the road in the emergency room." We were leaning over her literally knee deep in shards of blue-green glass. It was a very helpless feeling. With a little stimulation she awoke almost immediately. I felt like I was the one that was saved. About this time I looked up and there was a TV cameraman shooting the accident scene. "How absurd," I thought, "I wonder how I'll look on the Ten O'Clock News?"

Interestingly, by this time no less than three nurses and one medical student had individually arrived on the scene. It was comforting to know that you would be well cared for on the highway. Finally, to everyone's relief, the ambulance arrived. A neck brace was applied and she was carefully moved to a stretcher. I stood up and noticed that my left forearm was bleeding. I pulled out a small piece of glass.

The best thing happened next. The traffic policeman stopped the one lane of traffic to let me get back to my car. It felt great to have the traffic stop for me. I got into my car and before I knew it I was going 60 miles per hour. I had a flashback and instantly broke out into a cold sweat. I drove the rest of the way at a solid 45 miles per hour in the right hand lane. When I got home I noticed that both my hands and my trousers were covered with blood.

What's the point of all this? I'm not sure. Despite what happened I am convinced that it's better to be a good driver than a a lucky one. One thing is for certain. Every time I drive past the pock-marked area on the concrete median on my way home I have a biologic response complete with instant re-play. It's quite a show. ■

Continuing Medical Education

The continuing medical education accreditation program of the MSMA has full approval by the AMA's Council on Medical Education. The institutions and functions listed here qualify for Category I credit for the AMA Physician's Recognition Award. All accredited institutions in Missouri are invited to send this information for listing in MISSOURI MEDICINE. Please remember to include the name of the individual who can be contacted at your institution for additional information about your CME events.

December

9 **8th Annual Lee T. Ford Cervical, Thoracic & Lumbar Spine Symposium** — Location: Washington University Medical Center. Contact: Loretta Giacoletto, Office of CME, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6891.

9-10 **Epilepsy: An Update** — Location: Omni International Hotel, St. Louis. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

12 **MRI in the Clinical Management of Lymphoma** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

1989

January

9 **City-Wide Radiology Conference** — Location: St. Louis University, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

14-19 **Rheumatology for the Primary Care Physician** — Location: Copper Mountain Resort, Colorado. Contact: Loretta Giacoletto, Office of CME, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. 314/362-6891.

19-21 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Eason, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

21-22 **Breast Imaging Update** — Location: San Francisco, CA. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

23-27 **Diagnostic Radiology Seminars** — Location: Ixtapa, Mexico. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

29-Feb. 3 **Aggressive Management of Your Retirement Plan and Valuation of Your Practice** — Location: Virgin Grand Beach Hotel, St. John, Virgin Islands. Contact: James H. McCray, DDS, MAGD, seminar coordinator, Professional Education Society, 231-B Flamingo Road, Mill Valley, CA 94941. 1/800-872-3070.

February

4 **Cardiology Update: Looking Toward the 1990's** — Location: Adam's Mark Hotel, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

13 **MRI in the Pelvis: Staging and Monitoring Response Time in Therapy** — Location: Mallinckrodt Institute of Radiology. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110.

19-24 **Diagnostic Imaging Update** — Location: Park City, Utah. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

23-25 **9th Annual Conference on Peritoneal Dialysis** — Location: Loews Anatole Hotel, Dallas, TX. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

24-27 **Advanced Cardiac Life Support Provider Course** — Location: St. Louis University Medical Center, St. Louis, MO. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

March

4-11 **Seventh Winter Congress, Diagnostic Imaging** — Location: Courchevelle, France. Contact: Winter Congress, 21915 Roscoe Blvd., Ste. 222, Canoga Park, CA 91304. 818/700-9821.

5-10 **Magnetic Resonance Imaging Update 1989-Winter Conference** — Location: Snowbird, Utah. Contact: Radiology Postgraduate Education, University of California, Room 569-U, San Francisco, CA 94143-0628. 415/476-5731.

10-11 **34th Urology Seminar** — Location: Hyatt Regency Hotel, Kansas City, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

10-11 **Family Practice Update** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

11-12 **Family Practice Update** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

18-25 **Traveling Medical Education Course** — Location: Snowmass, Colorado. Contact: Linda Smutz, Kansas City Southwest Clinical Society, 222 W. Gregory Blvd., Suite 323, Kansas City, MO 64114. 816/523-3383.

28-30 **The Impact of Cardiac Surgery on the Quality of Life: Neurological and Psychological Aspects** — Location: The New York Hilton, New York, NY. Contact: Ann J. Boehme, CMP, CME Office, Long Island Jewish Medical Center, New Hyde Park, New York, NY 11042. 718/470-8650.

31-April 2 **Organizational Systems** — Location: School of Medicine, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

April

13 **Issues Facing the Diffusion of Medical Technology** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

14-15 **Midwest Conference on Eating Disorders** — Location: Hilton Plaza Inn, Kansas City. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

27-28 **Critical Care Update** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

May

4-6 **Pediatric Advanced Cardiac & Life Support** — Location: Cardinal Glennon Children's Hospital, St. Louis, MO. Contact: Virginia Engel, Cardinal Glennon Children's Hospital, 1465 S. Grand Blvd., St. Louis, MO 63104. 314/577-5657.

4-7 **Psychiatry Legal Environment: Medicine's Response** — Location: Don CeSar Hotel, St. Petersburg, FL. Contact: Anita Herbst, CME Office, St. Louis University School of Medicine, 1402 S. Grand Blvd., St. Louis, MO 63104. 314/577-8167.

8 **Stereotactic Breast Biopsy** — Location: Mallinckrodt Institute of Radiology, St. Louis, MO. Contact: R. Gilbert Jost, M.D., Chief of Diagnostic Radiology, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis, MO 63110. 314/362-7130.

12-13 **7th Missouri Clinical Conference on Arthritis** — Location: Holiday Inn Executive Center, Columbia, Mo. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

June

2-3 **Primary Pediatrics 1989** — Location: Holiday Inn Executive Center, Columbia, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

8-9 **Patent Development & Biotechnology Transfer** — Location: Stouffer Concourse Hotel, St. Louis, MO. Contact: Barry Kling, University of Missouri-Columbia School of Medicine, MA215 Health Sciences Center, Columbia, MO 65212. 314/882-4105.

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References

References should be cited in numerical order in the text and arranged at the end of the article in the same order in which they are cited. The reference should give name of author, title of article, name of periodical, volume number, initial page number and year. Authors are responsible for reference accuracy.

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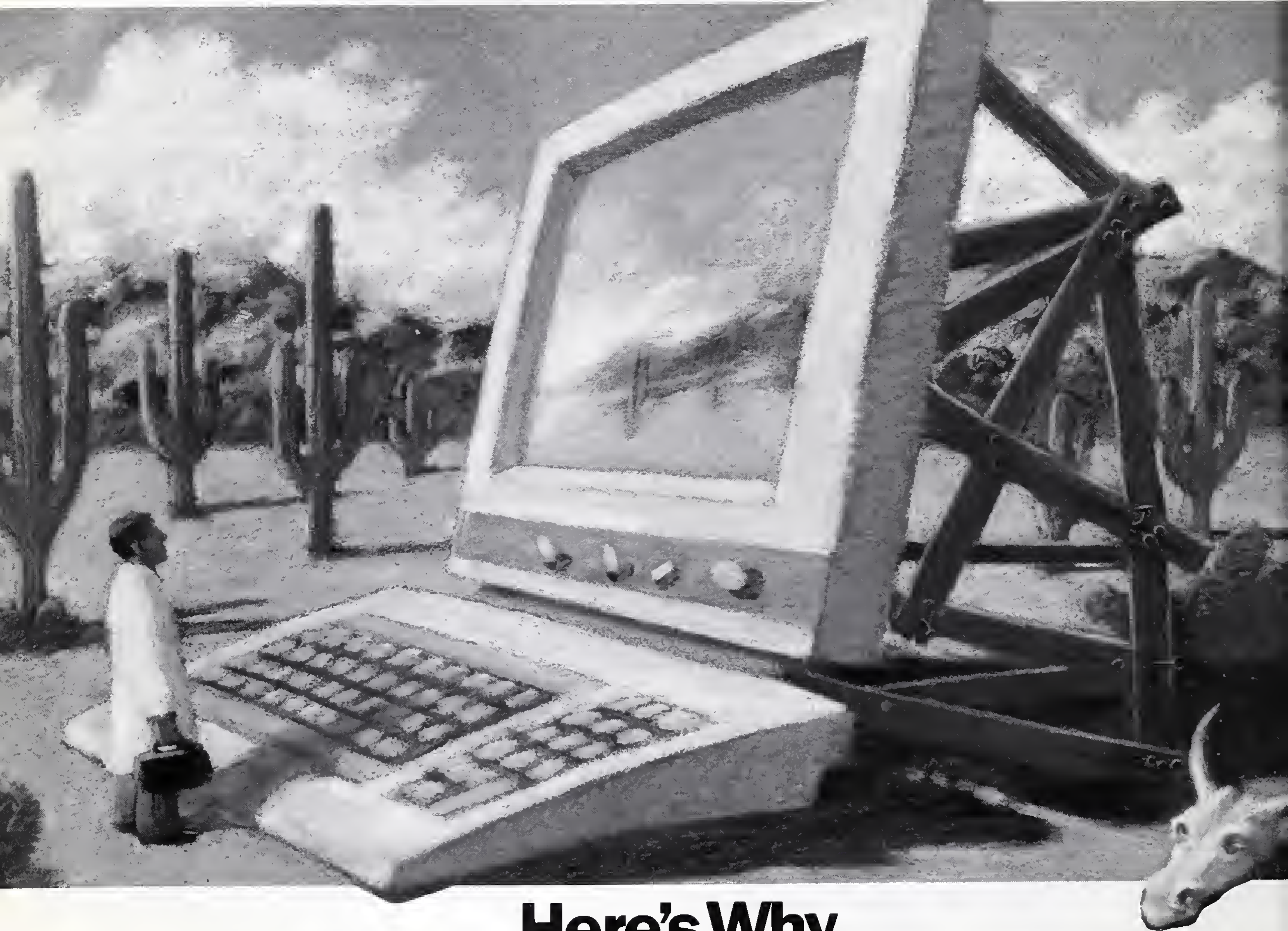

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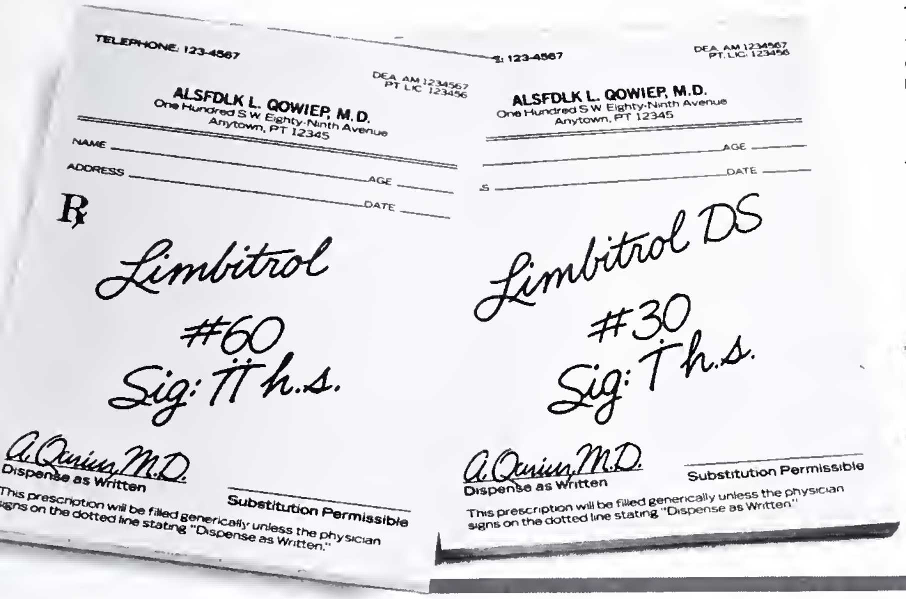
In moderate depression and anxiety

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]


TELEPHONE: 123-4567

DEA AM 1234567
PT LIC 123456

ALSFDLK L. QOWIEP, M.D.
One Hundred S.W. Eighty-Ninth Avenue
Anytown, PT 12345

NAME
ADDRESS
AGE
DATE

℞

Limbitrol
#60
Sig: ii h.s.

A. Quinn M.D.
Dispense as Written

Substitution Permissible

This prescription will be filled generically unless the physician signs on the dotted line stating "Dispense as Written."

: 123-4567

DEA AM 1234567
PT LIC 123456

ALSFDLK L. QOWIEP, M.D.
One Hundred S.W. Eighty-Ninth Avenue
Anytown, PT 12345

AGE
DATE
S

Limbitrol DS
#30
Sig: i h.s.

A. Quinn M.D.
Dispense as Written

Substitution Permissible

This prescription will be filled generically unless the physician signs on the dotted line stating "Dispense as Written."

Protect Your Prescribing Decision: Specify "Do not substitute."

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) ⒸIV

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) ⒸIV

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

Limbitrol® ⒸIV
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

> *Usage in Pregnancy:* **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively.
I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

ROCHE PRODUCTS INC.
Manati, Puerto Rico 00701

P.I. 0288

In the depressed and anxious patient

See Improvement In The First Wee

And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms

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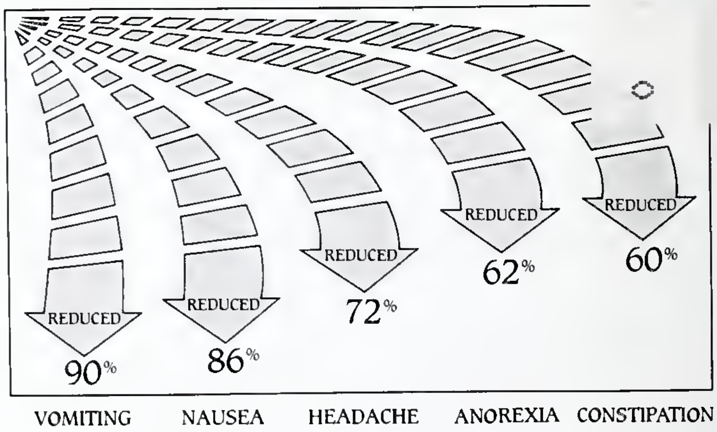
Percentage of Reduction in Individual Somatic S
During First Week of Limbitrol Therapy



*Patients often presented with more than one somatic symptom.

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

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